

THIRD SERIES VOL 57 NUMBER 5

MARCH 1950

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

66 PORTLAND PLACE LONDON W1 · TWO SHILLINGS AND SIXPENCE



Norman arch in St. Woolos Church, Newport, Monmouthshire. Photo by W. T. Barber

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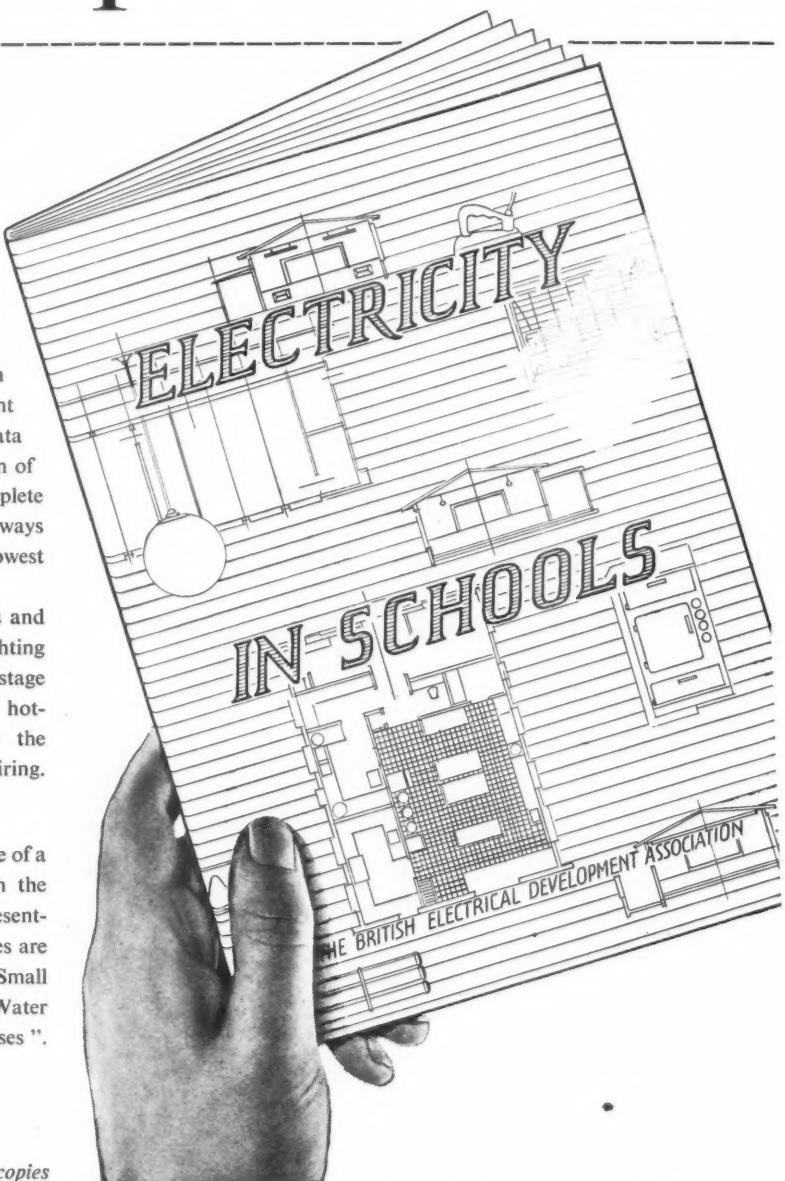
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R.I.B.A. Sessional Meetings

The General Meeting, fixed for 4 April for the presentation of the Royal Gold Medal, has been cancelled. Professor Saarinen is unable to come to Britain; a message from him will be published in the next JOURNAL.

Mr. Hugh Casson's paper on the 1951 Exhibition attracted an audience which an American would describe as 'an all-time high'. For the first time in its history the Henry Jarvis Hall and the Foyer were filled to capacity, not merely in regard to seating, but including standing room at the back of the Foyer and down both gangways of the hall. The audience was rewarded by a fascinating and sparkling description of this great and complex project. Mr. Casson's paper will be published in full in the April JOURNAL.

The next A.S.B. Lecture, on 18 April, is by Mr. G. A. Atkinson [A], who will speak on *Building in the Tropics, Research into Housing in the Tropical Countries, especially in the Commonwealth*.

Town and Country Planning

On taking office the Rt. Hon. Hugh Dalton, Minister of Town and Country Planning held a Press conference at which he outlined the policy he was proposing to adopt. He began by paying a tribute to his predecessor, the Rt. Hon. Lewis Silkin, in having passed through Parliament three outstanding pieces of legislation namely the *New Towns Act 1946*, the *Town and Country Planning Act 1947*, and the *National Parks and Access to the Countryside Act 1949*. His chief task would be to concentrate on possible administrative improvements in the working of these three Acts, particularly the *Town and Country Planning Act* which affected more people and more interests than the other two.

The new towns had of necessity been slow in starting, but people would realize that they were a fact and not a dream when there was actual development on the site. He proposed to press on with this, taking care that the new towns had a real life of their own and were not merely dormitories. Welwyn Garden City, for example, had become too much of a dormitory in a way never intended by its creator.

The first National Park was to be established this year in the Peak District. The second would be in the Lake District and the third in Snowdonia. The National Parks Commission also hoped to establish one of the long-distance routes, possibly the Pennine Way.

He attached the greatest importance to the growing of softwoods by the Forestry Commission. With proper use of land and adequate organization we could grow one third of our timber requirements, ninety per cent of the demand being for softwoods. This would mean the planning for and the growing of timber south of the Border on a scale similar to that now being followed in Scotland.

Housing Medals

At his address to the R.I.B.A. Council in March 1947 the Minister of Health announced that he was proposing to issue medals for the best designed housing schemes built by local authorities. The details of the scheme have now been announced to local authorities in Circular 19/50. During their preparation the Minister has consulted the R.I.B.A. Council on a large number of points.

An Awards Committee is to be formed in each region to adjudicate upon entries. The chairman of each committee is to be nominated by the R.I.B.A. The Allied Societies will nominate three members (four by the R.I.B.A. in the London Region). Three other members, all laymen, will be nominated by the Association of Municipal Corporations, the Urban District Councils' Association and the Rural District Councils' Association. (In the London Region members will be nominated by the L.C.C., the Metropolitan Boroughs' Joint Standing Committee, the Association of Municipal Corporations and the Urban District Councils' Association.) One architect member will be nominated by the Minister—usually the principal regional architect—and the Minister will also nominate one woman member, resident in the region.

The awards will be made annually for one urban scheme and one rural scheme completed in each region, except in London where one award will be for a new development and one for a scheme of reconstruction. The medals, of bronze, will be awarded individually to the architects responsible for the schemes.

L.C.C. Architects' Department

The London County Council have now announced officially the creation of a new Housing Division of the Architect's Department. It will be under the general direction of the Architect, Mr. Robert H. Matthew [A] and will be directly under the Deputy Architect, Dr. J. Leslie Martin [F] who will be responsible for the general policy of architectural development. The Principal Housing Architect has now been appointed by the Council and is Mr. H. H. Whitfield Lewis [A] who has recently been the assistant in charge of housing work in the firm of Norman and Dawbarn. As Assistant Housing Architect the Council has appointed Mr. M. C. L. Powell [A].

Members will recollect that three years ago the Royal Institute took strong exception to the action of the London County Council at that time in transferring their housing work from the department of the Architect to that of the Valuer. The London County Council then said the transfer would be made for a trial period; they have now reverted to the original arrangement though with the establishment of a sub-division for housing in the Architect's Department, under a responsible officer.

British Architects' Conference—Bristol Hosts Preparing Many Attractions

A big welcome has been arranged by the Bristol Society of Architects for members and friends who attend the 1950 British Architects' Conference at Bristol and Bath from 7 to 10 June. The Earl of Rosse, M.B.E., F.S.A., Chairman of the Georgian Group, is to give the first paper at the Inaugural Meeting on 8 June on *The Protection and Preservation of Ancient Buildings*. The second paper on the following day is to be by the Hon. Lionel Brett, M.A. [A], and will be entitled *The New City Centres of Europe*.

On Wednesday evening, 7 June, the Conference will begin with an informal reception at the Red Lodge, Bristol. Next morning the paper by the Earl of Rosse will be preceded by an address of welcome by Bristol's Lord Mayor, supported by the Mayor of Bath, and the President will address the Conference. In the afternoon of that day a garden party will be held at Blaise Castle, followed in the evening by a civic reception and dance in the famous Pump Room at Bath.

After the Hon. Lionel Brett's paper on Friday morning, 9 June, there will be alternative half-day tours, one being to most of the architecturally noteworthy places of Bristol, another to places of architectural interest in Bath, another to the Brabazon hangar (the largest aircraft shed in the world), and yet another to Prior Park, Bath.

Delegates and friends preferring to take a whole day tour on the Friday are offered the choice between two separate tours embracing Cotswold and Somerset villages, and a third similar tour (commencing from Bath) but with a Wiltshire bias. As a conclusion to Friday's events, the Conference Dinner will be held in the Queen's Hall, Berkeley Square, Clifton. Alternative morning visits to places of interest in and around Bristol have been arranged for Saturday, 10 June, with a visit to the 18th century Theatre Royal, Bristol, for those desiring to stay on during the evening.

A coach service between Bristol and Bath specially reserved for Conference visitors has been arranged; the Conference Headquarters will be at the Red Lodge, Park Row, Bristol. At the Civic Reception there will be an Exhibition, *100 Years of Architecture in Wessex*, and during the Conference there will be an exhibition of work of the students of the R.W.A. School of Architecture at 25 Great George Street, Bristol.

Bristol is one of Britain's most important outlets to the western hemisphere, and her inland docks still add a romantic touch to the life of the city, ships' masts mingling with the spires of churches. The city was heavily blitzed, over 3,000 houses being demolished and 46,000 damaged. A vigorous programme of housing and school building is proceeding, and the town plan for the city centre has been approved.

The programme and application form is enclosed with this JOURNAL; members and friends who are going to the Conference will greatly assist the arrangements and smooth organization by sending their applications to the Secretary, R.I.B.A., as early as they can. The final closing date for sending in Conference application forms is Saturday 13 May.

The Annual Reception

Members who wish to attend the Annual Reception on 28 April are reminded that they should send in their applications soon. Tickets are 15s. each. Members will be restricted to one guest each in the first instance, but may give the names of further guests for whom tickets will be supplied if accommodation permits.

For the entertainment of members, in addition to dancing and refreshments, there will be an exhibition in the Library of drawings of which the artists are unknown. Members and guests are asked to help in identifying the drawings as a basis for subsequent research. The puppet show which was such a success last year will be repeated.

Public Rights of Way

Since the Rights of Way Act, 1932, came into force some local authorities have made surveys of public rights of way, but under the National Parks and Access to the Countryside Act, 1949, it is the duty of every County Council in England and Wales, as the Surveying Authority, to compile a record of all public rights of way, a term that covers footpaths, bridleways, and roads used as public paths. The Act recognizes that it would not be easy for each County Council to compile such a record unaided, and therefore it is provided that the county districts and parishes shall be consulted and arrangements made for collecting the necessary information.

The Commons, Open Spaces and Footpaths Preservation Society, in collaboration with the Ramblers Association, have produced a booklet describing what has to be done in preparing the survey; the booklet is recommended by the County Councils Association and has been approved by the Ministry of Town and Country Planning. It may be had from the Society at 71 Eccleston Square, London, S.W.1, price 9d.

The Ruskin Society of America

We are indebted to Mr. Henry Russell Hitchcock (Hon. Correspondent) for an account of the inaugural meeting of the Ruskin Society of America which appears to be the creation of a band of Ruskin enthusiasts. These met at a dinner in the Hall of Italian Paintings of the Art Gallery of Yale University, subsequently holding a meeting in the Lecture Hall and inspecting an exhibition entitled 'Ruskin: Prophet of the Modern', in the Sculpture Gallery. The dinner, which began with Consommé Venise, Frondes Agrestes and Olives Rossetti, had for its main dish Dindon rôti Denmark Hill and concluded with Bombe Brantwood and Petits Fours Slade. At the meeting Mr. Lewis Mumford [Hon. A] spoke on *Ruskin: Prophet of Bio-technics*, and Mr. Hitchcock spoke on *Ruskin's Immediate Influence on Architecture*. The exhibition, which marked the centenary of the publication of the *Seven Lamps of Architecture*, was gathered from several American libraries and from private collections. The exhibits and their captions marked the stages in the artistic development of Ruskin. We suspect the admirably felicitous captions to be the work of Mr. Hitchcock; even without the exhibits they make fascinating reading as, for example: 'To some extent architecture was man-made geology to Ruskin' and '... his vision of architecture was happiest when patina, even decay, had "naturalized" the man-made detail'.

R.I.B.A. Kalendar

The next issue of the Kalendar will be published in the autumn and members and Students wishing to notify new addresses for publication should do so as soon as possible. The last date for receiving changes for inclusion in the new Kalendar will probably be at the end of May next, from those in the United Kingdom, and from overseas about a month later. It will still be necessary to restrict members and Students to one address each.

R.I.B.A. Easter Holiday

The office of the R.I.B.A. will be closed at 12.30 p.m. on Thursday 6 April, and will re-open at 9.30 a.m. on Wednesday 12 April.

The Library will close at 5 p.m. on Thursday 6 April, and will re-open at 10 a.m. on Wednesday 12 April.

R.I.B.A. Diary

TUESDAY 18 APRIL 6 P.M. A.S.B. Lecture. *Building in the Tropics. Research in Housing in the Tropical Countries, especially in the Commonwealth*. G. A. Atkinson [A].

FRIDAY 28 APRIL 8.15 P.M. TO MIDNIGHT. The R.I.B.A. Annual Reception.

TUESDAY 2 MAY 6 P.M. Annual General Meeting.



The Work of Lethaby, Webb and Morris

By Noel Rooke

Read before the Royal Institute of British Architects, 21 February 1950.
The President in the Chair

THE HONOUR and the responsibility of speaking here about three such men is great; for they had much influence in shaping the current thought of today. And, in the case of the first two, the extent of their influence is only now becoming generally known. If I am to be forgiven for overcoming a natural reluctance it can only be because I knew two of them.

As far as I know there is no published book on William Richard Lethaby. A paper was read by Mr. R. W. S. Weir at the Art Workers' Guild on 22 April 1932, and a few copies were printed at the Central School of Arts and Crafts. Your JOURNAL of 20 February 1932 gives a full report of a memorial meeting at the R.I.B.A. on 15 February, when a tribute was attempted by Sir Reginald Blomfield, who was a leader of the opposite school of thought, and who was too successful along his own line to see far along Lethaby's. He liked him; but, apparently, scarcely possessed the equipment to understand him. The report of the discussion which followed his paper gives as far as I know the only glimpses of Lethaby now in accessible form.

I shall attempt to carry on the description, as from that point, explaining first that my points of observation were these. He employed me as a schoolboy of 16 or 17 to make drawings for him in my Christmas and Easter holidays. Later I was a part-time student in his Central School of Arts and Crafts, combining that with the Slade. Later on still, I taught for him at the Central; and many years afterwards I was Honorary Secretary to the Arts and Crafts Exhibition Society of which he was then President. I knew him 33 years, and was the last of his friends, apart from his household, to see him.

He was born at Barnstaple in 1857 and died in London in 1931. The greater dignity of his later surroundings can easily hide from us what I take to have been the most important formative influence that he ever encountered. His first work was in the office of the local architect, Lauder; learning, and helping, to design farm houses and farm buildings; buildings which had to work, and work efficiently, as an engine or a pump must. If they didn't, no other qualities could save them from being failures. This experience of straightforward building was vital, and went deep into his nature.

By the age of 24 his ability had placed him where he would gain experience of a very different kind. Norman Shaw had invited him to become one of his brilliant group of assistants and pupils. He was now working on the most important public, and the most impressive private buildings

of the time, in touch with all the best that was being thought and done in his profession. He was a born leader, as Shaw soon recognized. He gave him a free hand, and made him chief assistant, with great responsibility in Shaw's frequent absence on sites and buildings. Up to then, in the matter of colour and texture, Shaw's buildings, like others of the time, had been hard and lifeless, looking harder and more lifeless as they got older. Lethaby understood the new quality he had seen in Philip Webb's work, even before he can have met him, the quality which comes from careful selection of texture and colour of material; and he began to add that to the work of Shaw's with which he was entrusted. Lutyens tells how he, Voysey, and their contemporaries learnt the new quality from Shaw, evidently not realizing that, in that, they were the descendants of the young Lethaby, and the great-grandsons of Webb. Mr. Brandon-Jones can tell more of this than I.

Lethaby led that busy office with vigour and gaiety. Mr. A. H. Christie told me that one hot summer's afternoon work was not going with sufficient spirit. Lethaby stopped it, and the office played cricket with set squares and rubber. Shaw returned in the middle.

Mr. R. W. S. Weir has written: 'I don't think Shaw ever quite understood Lethaby, but he trusted him implicitly. A friend one day, in conversation with Shaw, alluded to Lethaby as his pupil. "No," he said, "on the contrary, it is I who am Lethaby's pupil." To Shaw, Lethaby was loyalty itself. His respect for him was lasting, but he never would discuss him with anyone, and if the subject was ever mentioned he adroitly changed it.' I should like to stress this mutual bond of generosity and loyalty between the great man of his day and his young assistant.

All his life Lethaby was an ardent student. During his 12 years with Shaw he measured and drew in about thirty French cathedrals, attracted by the way structure governed form and its enhancements. Some of these drawings, and some of his conclusions, can be seen in his *Mediaeval Art*, published in 1904.

But by that date he was already thinking, as he made clear in his *Architecture of the Home University Series*, that his spare time in the eighties would have been still better spent in studying the structural mechanics available for use with reinforced concrete, if there had then been anybody to advise it. But I am convinced that that would have satisfied only one side of him.

Besides his sense of structure, and of enhancement of surface, he had a sensitive-

ness to landscape which produced fine water-colours all his life. After his death I was charged with the disposal of his landscapes, which were known only to his intimate friends. The British Museum Print Room gladly accepted some. I also offered some to the Tate. The reply was that it was most unlikely that any would prove to be of sufficiently high standard for inclusion in the National Collection, but they would politely look at one or two. I sent three. This resulted in a request to see others. I sent three more. They asked to keep all six, and did.

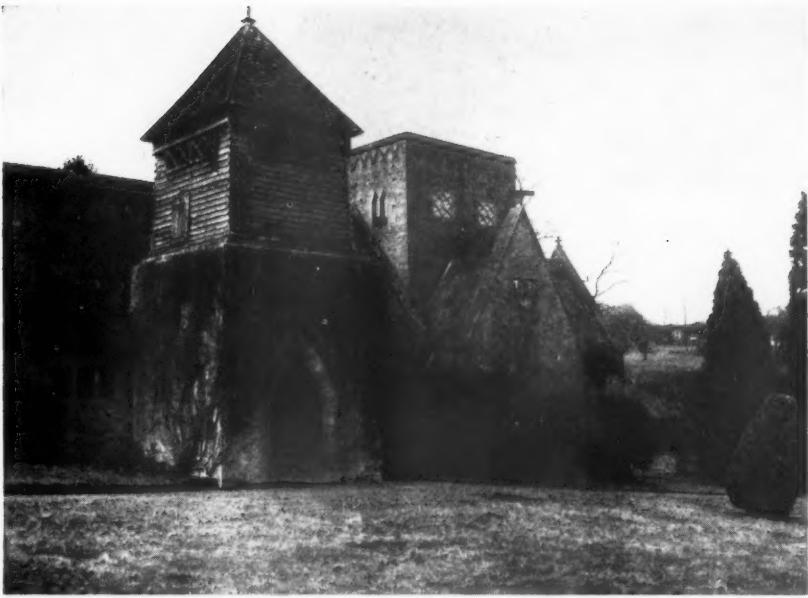
These then are the five strands of his experience, before he started work on his own; designing farm buildings; designing the most notable buildings of his day; following Webb's lead on texture of materials; brilliant analysis of construction; the study of enhancements of former buildings, and painting.

His mind was now 'tooled up'. But what sort of man was it that was going to use these tools—or would they take charge, and run the man? What was he like?

His imagination, of lightning speed and penetration, his contrasting opposite power of detailed industry and investigation, seemed bonded together by sudden complete relaxation into uproarious wit and gaiety. Few men have been such a lasting delight to their friends. I have never seen the kindling of such deep-seated laughter. He was incapable of irony, of laughing at people, or of just telling funny stories. His jokes were spontaneous explosions, combining the talk of the moment with some principle he had in mind, fusing them into a sparkling crystal. Mr. Alfred Powell has said: 'It seemed as though his five wits were multiplied by eight or ten; he had so much sensibility, and his senses were all so continuously alive.'

He was the humblest of men—and steadily refused any kind of honour; if any attempt were made to force an honour upon him he would have been shocked by the unseemliness. The only occasion when anybody got under his guard was once when Manchester University managed to slip an Honorary Degree into his pocket. He was successful in eluding—like Webb—the Gold Medal your Institute so rightly tried to give him. His kindness made him shrink from private debate and wrangling with opponents. But when decisions were being taken, he was a magnificent fighter. His instinctive courtesy, however, allowed him to use his great verbal powers but seldom.

The only time I saw him and Bernard Shaw together—they were old acquaintances—Shaw tried three bits of wordy wit



Brockhampton Church, Herefordshire, 1901. Architect: W. R. Lethaby

against Lethaby. Each time Lethaby in a flash had him lying on his back, so to speak, looking up at the sky with half incredulous amusement at his unusual position. At the third attempt Shaw, a good loser, accepted defeat with grace. No man ever threw his weight about less than Lethaby. He was so considerate of all weaker than himself, that new students thought him shy, timid, and probably ineffective; the nicer ones clearly wondered if they ought to try to help him out.

The core of Lethaby seemed to me to be loyalty, to his beliefs, and to everybody he worked for or who worked for him. For him, loyalty, his own loyalty, was an essential in working for anybody. If loyalty became impossible through any loss of respect, he must give up the work, however attractive in other ways.

In 1883 he formed the Art Workers Guild, with Prior, Ernest Newton, Mervyn Macartney and Horsley. His dislike of the absence of orderliness in public places amounted to physical pain. He was the first person to suggest that one of our most urgent jobs was to 'tidy our stations', which were appalling. In 1916 he was one of the founders of the Design in Industry Association.

Reference must be made to his sense of craftsmanship, the right and happy uses of the different kinds of stone, brick, wood, marble, and cast iron, especially in his interiors. This was one of the elements which made Lethaby's houses such a continuous pleasure to those who lived in them. A Lethaby cast iron fireplace may be seen in the office of the Central School, where it has given much pleasure to many who do not know its designer. This side of him had been developed from inherited ability, by contact with Webb, and later with the group of young architects who,

as Kenton and Company, took to designing furniture which eventually had important influences.

As I am not an architect I will not speak of the buildings he designed after leaving Norman Shaw: Avon Tyrrell, the Hurst at Four Oaks, High Coxease, Melsitter, the Eagle Insurance office, Brockhampton Church. But I can record things he made clear in conversation with me, from the time he was building them.

He could appreciate every refinement of taste, but he felt the contrast between the direct building, the true artistic economy, of farm architect's work, and the sham forms disguising structure, and pretending to be what they were not, which he saw being created. Philip Webb and his circle were, of course, the great exceptions to prevalent custom.

In his early middle life the main problem before architects appeared to him to be: how is the large important building of today to retain the honour and decency of the small and unimportant. For it tries to be imposing, and to use his words, 'An attempt to be imposing is an imposition'. It is using the idioms of past centuries and other languages; it results in being only ridiculous, structurally and visually dishonourable.

At a later stage the problem appeared to him to be: how is the small building of today to escape the same basic errors as the larger?

He knew the details and understood the work of the past better than the men who consistently imitated them in their own work. Fundamental theory of architecture, of building, and of living, was deep in him. He was the pioneer of modern architectural criticism. One of the first transmission lines that carried his thought out of England was Hermann Muthesius, who

was attached to the German Embassy to study English arts, crafts and architecture. He learned much from Lethaby, who, true to his nature, explained to him all that was good in the work of the men he had influenced directly, and saw to it that their work was much more fully represented in Muthesius's two great books of 1899 and 1904 than his own. In the end Lethaby has had more influence on world architectural thought than any other Englishman before or since.

These are some of his books: *Architecture, Mysticism and Myth*, 1891; *Lead-work*, 1893; *St. Sophia* (with H. Swainson), 1894; *London Before the Conquest*, 1902; *Mediaeval Art*, 1904; *Westminster Abbey and the King's Craftsmen*, 1906; *Greek Buildings represented by Fragments in the British Museum*, 1908; *Architecture*, 1912; *Form and Civilization*, 1922; *Westminster Abbey Re-examined*, 1925; *Philip Webb*, 1925-35.

For a trial trip in reading Lethaby, I would suggest the *Architecture*, though it is ostensibly written for non-architects, and the *Philip Webb*, though it is ostensibly professional. I would also recommend his *Form and Civilization*. He also became a leading international authority on several branches of the archaeology of architecture. And then he used his knowledge of the past, as it changes into the present, as a baseline, from which to observe the future of architecture, which he realized more than his contemporaries would have to be very different from that of the present—the present of his day.

Contemporary architecture—that is, conscious sophisticated architecture as distinct from the free products of the jerry-builder—contemporary architecture, he held, was ceasing to be just wise building, and had become a series of architectural fashion plates of the whim styles, which did not correspond to our building methods, materials, needs, or circumstances. Fashion had kept on changing from sham-Greek, to sham-Gothic, to American Beaux-Arts; and, on entering a period of poverty, to sham-Baroque. Architects had become fashion-tasters, not builders. At the turn of the century his opinion, as expressed to me, was: All these magniloquent shams will have to be ground down into the dust, before we can have good buildings again—ploughed under and right into the soil. And we shall have to make plain straightforward buildings, free from any decoration, probably of steel and concrete. We shall have to make buildings as good as our bicycles, and as plain, before we can feel honest enough to make and enjoy the enhancements we need so deeply; it is only honesty which will allow us to make and enjoy them.

He was preaching the need, and the inevitability, of functionalism, before the Edwardian era had begun. I remember his delight in describing some reinforced concrete platform shelters he had lately seen in a small Swiss hill station. He saw them as the first beginnings of change.

But functionalism was only to be an intermediate stage—a winter landscape of



Avon Tyrrell, Hampshire, 1891. Architect: W. R. Lethaby

well-tilled soil free from weeds, and of skeleton trees—before the sap rose again for the next flowering. He was clear that architecture was only building, at its highest power. Unless an architect had building ingrained into him he had nothing to develop. An architect is a master builder or nothing.

He appreciated the prospect of the winter maladies of functionalism and its own peculiar office-bred fashions, shams, and romanticisms: those which make one long to see the buildings safely translated back to the drawing board stage again, with their lovely lush strokes of the ruling pen. All this would be part of the ploughing down and harrowing of the winter time.

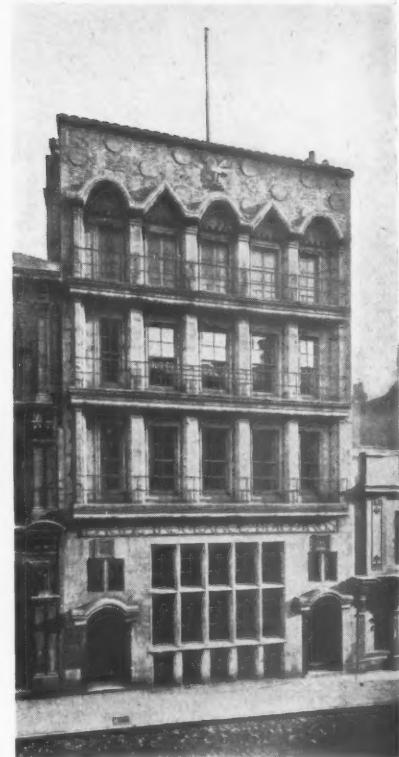
At this period he was laying the foundations for the opinions of many who would be putting them into practice later. There is a description of Gainsborough as 'the man who decided who our great-great grandmothers were to be'. Lethaby could perhaps be described as the man who decided the architectural marriages of our great-grandsons. But in 1900 the winter ploughing of functionalism and the rising again of the sap in the spring which may follow it, were still far in the future.

The architecture of the day could not command Lethaby's respect or loyalty. A man like him had no real place in it; other demands also were being made on his time and energy, which would prepare the ground for the changes he felt inevitable. The need was for clearer thinking, and for men trained to greater sensibility.

Some years before, when he was 38, his friends, Sir Sydney Cockerell and Sir Emery Walker, with considerable difficulty persuaded him to apply for the Principalship which would give the start to the new L.C.C. Central School of Arts and Crafts.

He and Frampton, the sculptor, were appointed joint Principals; but from the first, the work, the creative ability, and the force were Lethaby's. I never saw Frampton there and only met one man who said he had. Lethaby made it a school which influenced and changed, for the better, every school of art in this country except one, and had great influence abroad. Its importance was recognized abroad at an earlier date than in England, and within two or three years foreign governments were sending teachers and pupils to study there. There is no time to describe the new ground he broke. I made a summary of it in *THE TIMES EDUCATIONAL SUPPLEMENT* of 28 December 1946. A good description of his personal methods was given by Mr. Percy Waldram in your *JOURNAL* of 20 February 1932. He treated his teaching staff with even greater generosity than Norman Shaw had shown him; when hard pressed for advice on a difficult case he would reluctantly but penetratingly say, 'Well, if you do so and so, the results may perhaps be this or that; and if you do the opposite, either this other or that other. But what I think doesn't matter in the least. It's what you think that does.'

In 1901 he was asked to become Professor of Design at the R.C.A. He explained to Douglas Cockerell and to me at lunch one day: 'At the moment it is the worst school in England, probably the worst in Europe, except X. So I'm going to it. I feel a call, like Livingstone to the heart of darkest Africa. They'll probably try to eat me. I'm going to accept, on condition that I am allowed to stay on here as well.' For having got the Central on its feet, thanks to the loyalty of the staff, he was then able to run it on two or three evening attendances a week. Lest his



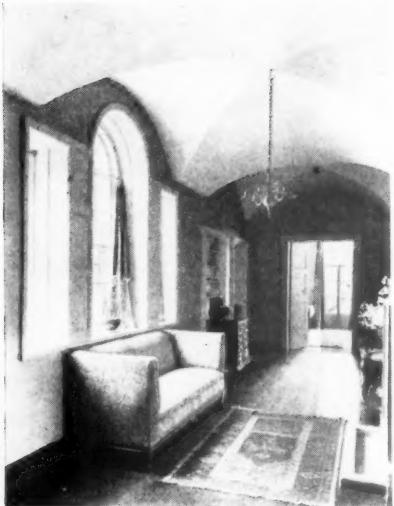
The Eagle Insurance Building, Birmingham. Architects: W. R. Lethaby and J. L. Ball

motives should be misunderstood, I should state that his salary at the Central was minute; it was the work that interested him.

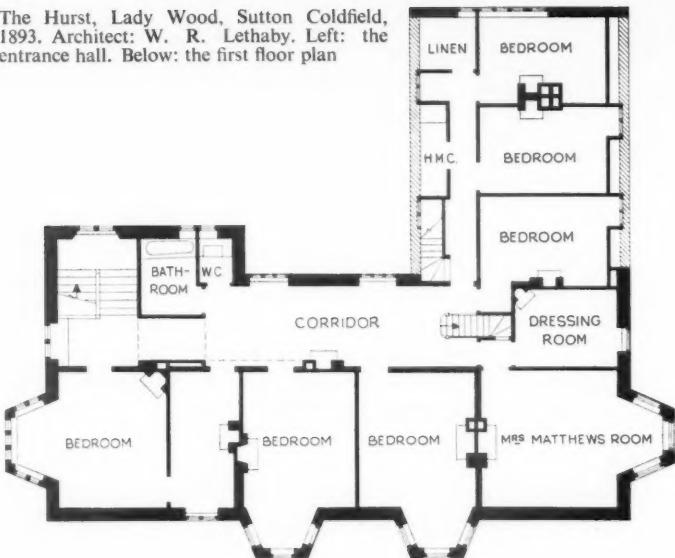
Lethaby was appointed to the R.C.A. as the result of a reorganization inspired by Walter Crane, whose work was based on the usual assumption that a designer should be prepared to design for all processes and materials, and should proceed from generalities to the particular. Lethaby's working principle was the opposite, that design is best performed by those familiar with the material and process, and that movement should be from the particular to the general.

That the Department of Science and Art—now absorbed in the Ministry of Education, should accept and implement a plan, and at the same moment appoint somebody to carry out the opposite, will surprise no one conversant with art education in this country.

One of our national peculiarities is that, except for short periods which are soon liquidated, we control our schools of art either by professional administrators, whose labours have some resemblance to that of a master-shunter in a railway marshalling yard, or by bodies whose members can not understand the educational problems involved. It is as if a college at Oxford were controlled by a body few or none of whose members had taught in a college, been an undergraduate, or had the experience of being taught to write. Or, as if cricket were controlled by people who had



The Hurst, Lady Wood, Sutton Coldfield, 1893. Architect: W. R. Lethaby. Left: the entrance hall. Below: the first floor plan



never played it, and never watched it from inside the fence.

These men of good intent are easily loaded with ideas derived from all quarters except those which have experience of the professional development of the young. So, events are quite unpredictable. I have had moments in mountaineering which might be described as interesting, even, one might risk the word, exciting. But from experience, I know that their demands are not to be compared with the sportsmanship, stamina and steady head required for teaching in a school of art, if you are unfortunately in a position to understand what is happening. Lethaby had his full share of all that in his two schools.

At the R.C.A. he had the reward of doing more than anybody else in putting it back on its feet. And as usual, he surrounded himself with people who, from being strangers, became friends.

In 1893 he joined Webb and Morris on the Committee of the Society for Protection of Ancient Buildings, and gained much experience of the ways of dealing with the problems of preservation and repair they present. But also as Lethaby wrote: 'It is a curious fact that the Society, engaged in an intense study of antiquity, became a school of rational builders and modern building.'

He was devoted to Westminster Abbey, and his special study of it resulted in his book, *Westminster Abbey and the King's Craftsmen*. He knew more of the abbey than any man ever did, and it was natural that in 1906 he should be invited to take charge of it as surveyor. It was then covered in grime inside and outside. The usual method opposed by the S.P.A.B. of dealing with a building which had thus been neglected was to chisel and scrape away the old surface, altering the proportion of mouldings and so on, and to make the building look as far as possible as if it had been built the week before. If structure needed actual repair, more harm than that was done. The front of the north transept of the abbey had been redesigned and rebuilt only a generation earlier.

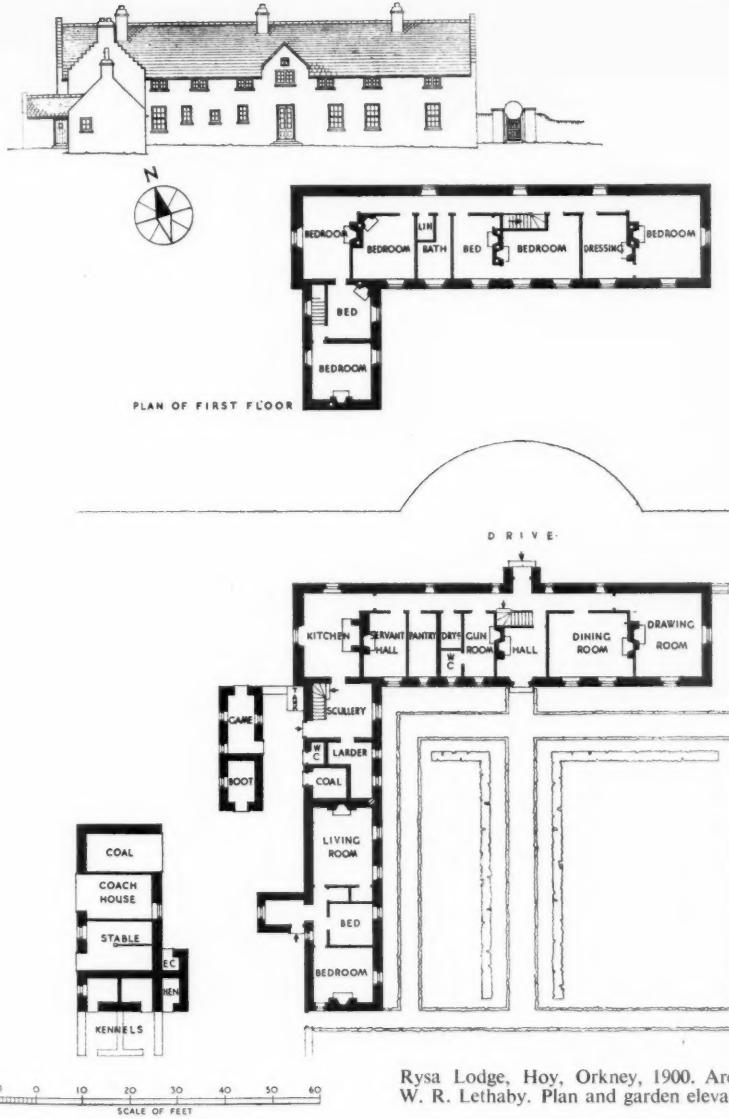
The Hurst, Lady Wood, Sutton Coldfield. Ground floor plan



Lethaby instead, instituted a process of cleaning, followed by a coat, or coats of limewashing outside, to preserve the surface; and various modifications of the limewash inside which I should prefer should be described by professionals, not by an amateur. Monuments and paintings or sculpture were most carefully cleaned. In the course of years the abbey became unrecognizable, as to tone and brightness. While all original work was preserved, no

modern stuff was put in. It would destroy confidence like false currency.

Many persons wished to have the 18th and 19th century monuments removed into some sort of campo santo, to be built far away. Lethaby resisted that. If they went, what about the scars they would leave? Sham Gothic fillings would surely some day fill their holes. It was Lethaby's boast that at no future age anybody would be able to point to any part and say, 'that



Rysa Lodge, Hoy, Orkney, 1900. Architect: W. R. Lethaby. Plan and garden elevation

is Lethaby's addition or restoration'. He was the first surveyor to make a regular weekly round of the abbey, up and down, in and out.*

This appointment ended sadly, but wisely. I won't go into details. He took me as his companion on his last round into the remote parts and under the original roof timbers of the apse. The mere absence of Lethaby caused lack of confidence; and the 'sham-Gothic plus sham-Jacobean' additions which had been proposed were not made.

Like Webb and Morris, he looked on Ruskin, who was 38 years older than he, as the greatest man of the 19th century. The name Ruskin meant something quite

different in those days. For he was the first man to appreciate that an ancient building is a piece of life of the past, still alive and jutting up through layers of time into our own day, which is destroyed by restoration. He had a keener social perception and conscience than any of his contemporaries. He had a degree of sensibility which caused him to be the first to perceive responsibilities that are now accepted as a commonplace, and he was a magnificent draughtsman.

Here is Lethaby's opinion of him: 'Man can not be civilized, or kept civilized, by what he does in his spare time; only by what he does as his work. Ruskin understood that, and so became the inventor of modern thinking: but it will take several generations yet for the idea to spread. It is still too strange and unacceptable to a world which is pinning its hopes on

* Since writing this, my attention has been drawn to *The Care of Westminster Abbey* by J. G. Noppen, QUARTERLY REVIEW, Oct. 1932, which contains valuable information on Lethaby's work at Westminster.

hobbies.' Lethaby had himself been searching for the idea, and was nearly satisfied with Tolstoy's description, but was more fully satisfied by Ruskin's. He repeated what I have just said, in almost the same words, three times over a space of about thirty years.

We have this record of Lethaby's attitude to Morris's work. He said that while he himself loved most art, from Egyptian to Japanese, a few things seemed to suggest to him a more inward harmony and contentment than the rest: among these were mediæval buildings and Morris patterns. He said: 'It may seem absurd to mention mere chintzes and wallpapers with world masterpieces, but to my mind the Morris designs are not mere delights—they are depths.' Of his circle the man he put highest, and revered most, was Philip Webb.

Sir Sydney Cockerell has made the best summing up of Lethaby's qualities: 'A certain childlike simplicity must be mentioned first. Then his nobility of outlook, his self-effacement, his learning, his wit, his penetrating vision, his industry in research, his fairness in discussion, his sympathetic encouragement of young students, his general loving-kindness, and his scorn of all that is shoddy, pretentious and base. His many friends looked up to him with a singular admiration and devotion. By each one of them, while life lasts, his memory will be cherished as that of one of the rarest of spirits. In their eyes he was indeed not so much the artist, the scholar, the authority on this or that, as the saint-like and peerless comrade whom they will see no more.'

Philip Webb was born 26 years before Lethaby in Oxford, in 1831, the son of an Oxford surgeon, he worked at architecture from 1849 to 1900, and died in 1915. He is recorded and brought alive by Lethaby's *Life*. The illustrations are small and there are no plans; but for this, imposed by the size of the book, it could scarcely be bettered. The professional characteristics, principles and opinions of contemporary architects are analyzed as a background to the description of Webb. William Butterfield and John T. Emmett appear as the most intriguing. I imagine it must be one of the most entrancing books an architect could read. It is out of print. The S.P.A.B. still have some copies for sale.

I only knew Webb during his last 15 years, so I must draw heavily on descriptions by his friends—especially Lethaby—after comparing them with my own very vivid memory of him. I once had the pleasure of staying in one of his country houses, 'Clouds,' as guest of the Percy Wyndhams for whom he had built it. I am ashamed to confess that at first sight I was almost disappointed by its exterior. But at the end of a few days I wished I could live in it for ever.

The keynote of Webb's thought was, I believe, that his buildings must be modern of his day—he did not, of course, mean any anticipation of modernistic—but modern in using them current methods and local material according to the best

ordinary practice. The next most important thing was his insistence on simple perfection, in the simplest and humblest way. As a boy he was devoted to horses and was a fine rider—all animals were an open book to him and he drew them magnificently, often for Morris. The Oxford of his youth must have shown every degree of horseflesh, as well as of architecture and of men. He was resolute to be content with nothing short of the best. He never had money, to speak of, at his command, and he was always content to go without much in the way of possessions. But what he did have, must be simply the best, the best there was. This applied even to the plainest ash walking stick, or an apple-pie. That I have experienced, more than once. He did the same over his buildings. From his conversation I should imagine he must have taken more pains over exact siting of his buildings than was usual, and certainly over choice of alternative local material, by discussion with bricklayer or mason, to whom he could, I heard, talk by the hour to get at local reasons and methods for dealing with wind or rain problems. He had the gift of making such men talk freely and naturally. Webb was the first architect since the Renaissance to select materials with real sensibility to colour and texture and surface. That is saying much, but I am sure that it is true. Webb's buildings improve, externally, with age. Those of his contemporaries did not. Lethaby learnt about this from Webb's buildings, and introduced the quality to Shaw's later buildings, whence it has spread all over the world.

Lethaby says that Webb was the only working architect of the time who saw through Ruskin's words to what he was driving at—"a new kind of ethical dignity" in building as in everything else. Most of them, when Ruskin tried to illustrate universal laws by *The Stones of Venice*, seem to have thought he meant they were to set up sophisticated imitations at Exeter or Edinburgh of Venetian "elevations" as represented in his book illustrations.

Webb believed that an architect must accept a rational theory and develop its consequences in practice. He must *build* again. Lethaby summarizes Webb's own General Theory under headings, and explains them: Common Tradition, Building Craft, Labour and Pains, Sound Materials, Land Love, Locality and Site, Purpose and Humanity, Directness, Gradation, Invention, Commonplace and Common Sense. He believed that the best way to learn to build well was with a builder.

His relation to his employers was that of a man who is going to give more than he can receive; and he would only give on his own terms. His output and turnover were scarcely one and a half new buildings a year. George Jack, his assistant, wrote: "Had he desired he might have built many more houses, but he would never undertake more work at one time than he could personally supervise in every detail."

Lethaby quotes a letter, which shows how his clients were hand-picked:



Garden wall and screen at Tangleay Manor, Guildford, 1885. Architect: Philip Webb

'To W. Tatham, Esq. July 25th, 1874.
Dear Sir,

I beg to acknowledge the receipt of your letter of the 23rd inst., and to say, in answer, that it will be impossible for me to enter upon any fresh work for some time to come, on account of present engagements. Also, to avoid any possibility of misunderstanding, I will say that for some time past I have decided not to undertake to build for anyone who is not conversant with my work and able to judge of what would be the finished effect of that which I should agree to carry out.—Yours truly,
Philip Webb.'

As may be guessed he was firmness itself with his clients, and remained their friend for life. From the many letters Lethaby prints, and from memory of him, I should say that he did not rule with an iron hand in a velvet glove, but as an extremely upstanding straightforward human being, and clearly possible friend for the future.

His friends, of whom I knew many, were devoted to him. I must mention Sir Sydney Cockerell, Sir Emery Walker and Mr. Alfred Powell. No man is a hero to his own valet; but his housekeeper, Mrs. Dickinson, said, "I consider the 15 years I was with him"—his last 15 when a strong man can be difficult—"the best spent of my life; I can always see his happy face." To understand him, now, one must, I think, read Lethaby's *Life of Philip Webb*, which brings its own reward.

It seems that I ought, probably, to stop at this point; because I did not know Morris, and only saw him as a child. But I have been asked to go on. My evidence can be only of the impression I could myself see, later, that Morris had made on those many of his friends I knew. They included Sir Sydney Cockerell, Philip Webb, Lethaby, Catterson-Smith, Sir

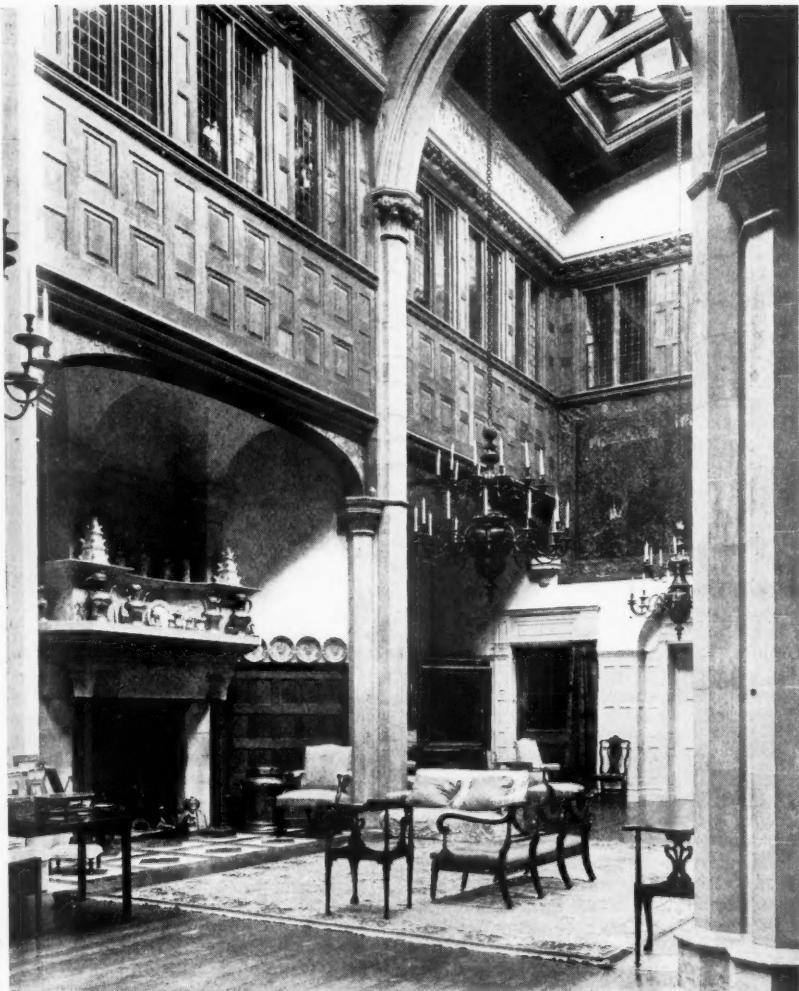
Emery Walker, and my father, who had known him 25 years.

William Morris was born in 1834 and died in 1896. He was three years younger than Webb, and 23 years older than Lethaby. All three met and worked at the Committee Meetings of the Society for the Protection of Ancient Buildings; Webb and Morris from the foundation in 1877, and Lethaby joining them in Morris's last years, and together they dispported themselves at the famous meals which followed.

As Webb once jestingly reminded Morris, he had "brought him up by hand", when Morris first turned to the arts and became a pupil in Street's office, where Webb was at that time senior assistant. This all-important truth has been obscured by Morris's brilliance, and now seems generally forgotten.

The authoritative accounts of Morris are full and excellent. Mackail's *Life of Morris* of 1899 is both a work of history and of literature. The new 1950 edition includes an introduction by Sir Sydney Cockerell, which though brief is an additional work in itself. Lady Burne-Jones's *Memorials* of her husband gives another portrait, by a very exceptional woman. From 1910 onwards May Morris, another notable woman, gives descriptions of her father in the introductions to the volumes of his *Collected Works* and shows the happiness of his family life. In the final 26th, or 2nd supplementary, volume, of that series Bernard Shaw gives a sparkling description of the household, which as it was written after an interval of 50 years may perhaps be dramatized by memory.

The first detailed impression his friends made on me concerned his vitality and energy. This is the sort of thing one would hear. Douglas Cockerell told me, "Other men make patterns of flowers, and make



The hall at Clouds, Wiltshire, 1881-6. Architect: Philip Webb

you think of cut flowers indoors. But Morris made you feel you were in a garden in June; or by a hedgerow, and that you must get your shears quickly or it will grow too tall'. Mackail quotes a physician, on Morris's death at the age of 62: 'The disease is simply being William Morris, and having done more work than most ten men'.

The second was his manliness—I don't only mean the vigour of language and temper which his friends and his workmen found so attractive. I mean what Sir Sydney Cockerell has described in the new Introduction to *Mackail*, 'He was sound and sweet—the sweetness of an oak post—and genuine, through and through, wholly without pose, fustian or pretence. There was nothing petty in his nature. He was self-sufficing, but never self-centred; though he became utterly absorbed in any work on which he was engaged'.

The third was his respect for any material he used. His prowess with the single stick was such that in the end his friends refused

to face him at it. But he could not do violence of any kind to any defenceless raw material he was using; he studied how to use it, as it would be used.

The fourth was like the others: his straightforwardness in dealing with men. Hence his pleasure in reading of such characters as Joe Gargery and Jorrocks.

There is a point which seems to be in need of clarification at the moment, Morris's socialism. I have referred to Lethaby's saying that Ruskin invented modern thinking by showing that men could only be civilized by means of their work. From that side of Ruskin, Morris created his own conception of socialism; which, to quote Cockerell's foreword, he held was concerned 'less with material gain for the working population than with a readjustment of society that would make all men happy and self-reliant in their work, and once more producers of the sort of spontaneous beauty in everything wrought with their hands that we associate with the almost faultless craftsmanship of

the 13th century. That this was bound to come after the abolition of the capitalist system and of commercialism was, in the 'eighties, of the nature of a religious belief with Morris'. Fabianism, or socialism with not fewer, but more, regulations than capitalism, would have outraged him.

Lethaby refers to somebody as 'less able to understand the principles of the Society for the Protection of Ancient Buildings than Bernard Shaw is to understand Morris's socialism'. Shaw says in the introduction I have mentioned that, 'Our suburban middle class socialism would have been anathema to him'.

These are but details; the important thing is the deep certainty of all his friends whom I knew that Morris was a colossus, with inventive capacity, personality, and genius towering above everybody round him—a force of nature. This is so unquestionable that it seems as if it would be a weakening of their unanimous statement, an impertinence to them, to say more.

DISCUSSION

Mr. Henry M. Fletcher, M.A. [F]: It is an easy thing to move a vote of thanks to the author after a paper like this, and it gives me very great pleasure to do so. The difficulty is that he leaves one so little to say, but I shall do what I can to back up his statements. With regard to Morris, I heard him speak only once when he gave a lecture at, I think, the New Gallery. I believe that the subject was Tapestry, but it was in my extremely callow and pre-salad days, so that the chief impression left on my mind was that this was a man who was very angry, and I was quite sure that he had cause to be angry and that he was perfectly right.

Morris made his own world to such an extent that in my young days Morris chintzes, Morris wallpapers and Morris carpets seemed to be natural products. All our friends had more or less of them. One of the great things which he achieved was quality, not only in design but in material. These things lasted what would seem an eternity to present wallpaper or textile manufacturers. I have seen some wallpapers in the houses of one or two friends within the last twenty years which I believe were put up in the days when Morris was selling them, and which are as fresh as when they were put up.

One of the achievements of Morris was to be one of the early clients of Philip Webb, when he got Webb to design and build the Red House for him. That brings me to Philip Webb, the man whom Lethaby called 'the hermit architect'. There was nothing that Lethaby envied more in Webb than the fact that he was a hermit, that the urge for propaganda never drove him out to fight in the open. He was a master of many crafts, but all the time he was an architect, because he, unlike many of the people who studied the crafts very eagerly at that time, produced architecture out of them. There was a wholeness about the works of Philip Webb; he knew how to

combine scale and materials and ornament and unornament, and types of unit such as doors and windows, into a single whole.

I should like to mention what I know of the few works of his that are in London, in case you want to see them. In the first place, there is the office block in Lincoln's Inn Fields, which is very remarkable when you consider the time when it was built. Then there is the house which he built for Lord Carlisle in Palace Gardens, which has become part of the premises of a large commercial undertaking, but which was preserved by the energies of some of Webb's friends. There is also a group of small houses in Redington Road, Hampstead. I do not know whether they still exist, because I have not been there since the war, but they were extremely pleasant and unmistakably Webb. There is a large house in Holland Park Road which has been simply murdered by a new top storey of shiny bricks and a roof of shiny tiles.

The house of his that I know best, the only one which I really know, is one that he built near East Grinstead for an old family friend of ours. It is perhaps an extreme instance of the mixture of types and materials in which Webb indulged. There is brickwork, stonework, tile hanging, sash windows, casement windows, tile roofing, slate roofing and stone roofing, and yet the whole thing hangs together. I think that he did this because he liked it, which is quite a good reason, and he wanted to produce the effect, as Mr. Rooke said, by modern means, because all the materials and types that he used were in current employment at the time. It was rather strong meat, however, for some of the lay people of the day.

Then we come to Lethaby, and here I am at one with Mr. Rooke in having known him. I did not know him so well as Mr. Rooke did, but to know him at all was to love and admire him. One of the great advantages which he had over many architects and many people who write books about architecture was that he had eminently the seeing eye and the expressing tongue. The book of addresses called *Form in Architecture* is full of brilliant thoughts in provocative phrasing, good for opponents and supporters to sharpen their wits on.

His memory of mediæval buildings was retentive and exact, and his vast knowledge of them enabled him to solve many historical difficulties. It gave him too that rare insight into the minds and aims of builders and craftsmen which he showed in *Mediæval Art* and elsewhere. To most scholars the clear prevision of 'modernist' architecture would have been impossible, but Lethaby valued scholarship not only for its own sake, but as a means of serving the present and forecasting the future.

His talk was full of wit, flashing and unexpected, but it was never trivial; his wit was always exercised on something which was worth while. You felt always his burning enthusiasm for architecture, and his enthusiasm for an architecture full of meaning, and for what he calls a society governed by common sense—that is, of course, Lethaby's common sense, which is a hundred times less common than the common

sense of the common man, and a hundred times more sensible than the common sense of philosophers and social thinkers who have not had their brains fructified by any sort of manual or tangible labour.

His interest in architecture and building was universal. Anything that set him thinking, from palæolithic times to now, from China to Peru, he would pounce upon and make it his own. He knew all about everything to do with building. Lest you should think that he did not appreciate Classical architecture, you should get hold of his book on Greek buildings, which arose almost entirely out of his study of the fragments in the British Museum, and you will see how completely he appreciated them and with what brilliance he made suggestions for studying the purpose and the probable shape of the buildings from these fragments.

What strikes me in thinking over the work of these two men, Webb and Lethaby, is what Mr. Rooke has described as the essential manliness of their work. Lethaby's own work is so rare that there are few people who have seen more than one building of his, so that you will have to take that from illustrations; but both these men, it seems to me, were in the central line of great architecture. The men who copy work of older styles are on one side, and the men who are out for originality entirely are on the other; but these two men worked with local materials and used them with dignity and appropriateness and studied the living ways of the people who were to use them. Their work was to them more than the expression of themselves. There was a sort of dignified personality about it.

Mr. John Brandon-Jones [A]: It is a very great honour and privilege to me to be asked to second this vote of thanks. I have a great admiration for the three men about whom Mr. Rooke has been telling us, and I have known Mr. Rooke, man and boy, for some forty years. It is therefore particularly pleasant to be able to thank him personally.

While I am doing this, and before I go on to anything else, I should also like to thank the people who have been so helpful and generous in getting together the exhibition of work which you see at the back of the hall. I am sorry that it can not be left up any longer.

In particular, I should like to thank Mr. Waters, who has done most of the hanging, and whose office staff has done a great deal for us by typing letters and collecting various exhibits. I should also like to thank Miss Dorothy Walker, who has been most kind and helpful and has let us have samples of wallpaper by Morris and some very interesting drawings and sketch books by Webb. Miss Walker has promised that they shall ultimately find a place in the R.I.B.A. Library, where people will be able to see them. We are very grateful for her help in that. We should also like to thank Miss Winmill, Mrs. Griggs, and Lady Llewellyn Smith, who have helped by lending drawings and furniture and Sir Sydney Cockerell who has lent us a water colour portrait of Webb by Fairfax Murray and examples of printing from the Kelmscott Press. We are



Archway in garden wall at Arisaig House, 1863. Architect: Philip Webb

also indebted to the Trustees of the Tate Gallery and to the Art Workers' Guild for the loan of exhibits.

I should like to call attention to the fact that the greater number of the drawings on the walls are from our own collection upstairs. I think that it is important to call attention to that, because very few members of the Institute know what we have got ourselves. That brings me back to Miss Walker again, because most of the Webb drawings that we possess were given by Miss Walker or by her father, Sir Emery Walker.

I should like to say one or two further words, about my impression of the buildings of Webb and Lethaby. I am intensely interested in this period, as a result of coming quite accidentally in contact with two of Lethaby's houses, in the island of Hoy in the Orkneys. Those of you who were in the R.N.V.R. or any other Naval service may know Scapa Flow, and may remember that the Admiral was billeted in Melssetter House. I was in the Admiralty Works Department and I had to go round the place and make periodical inspections. I had no idea until I got there of what I was taking charge, but then I decided to see more of this work. It was through Lethaby's book on Webb that I went to seek out his works, which I have done whenever I have had the chance, from Arisaig in Inverness-shire down to the house near East Grinstead of which Mr. Fletcher has spoken. We have drawings of that house in the R.I.B.A. Library, and I recommend you to ask to see some of them.

I was particularly interested in what was said by Mr. Rooke and supported by Mr. Fletcher, that Webb's work is not always quite obvious at the start. Mr. Rooke said that at first he found Clouds a little disappointing, but then got to like it. I think you will find that that is so with all the London

buildings which Mr. Fletcher mentioned. Incidentally, the houses in Redington Road are still there and very pleasant.

You will have to make an effort to go to see Webb's work, because most of his best houses are in somewhat inaccessible places. Secondly, you will have to make an effort to study it and understand it when you stand in front of it. Some examples are easier to understand than others. The farm buildings and cottages are a delight, but the large houses like Clouds are probably difficult to understand.

There are one or two things on which I should have liked to hear Mr. Rooke speak, but he may think that I am asking him to be indiscreet. I should like to know something about the way that Lethaby's ideas fitted in, or did not fit in, with the ideas of Walter Crane, who was responsible for an important reorganization of the Royal College of Art just before Lethaby went there. Moreover, I think that in the early days of the Central School it was run more or less by a private Committee, and afterwards, I understand, by the Education Department of the L.C.C. I imagine that that must have caused difficulties.

I should also like to mention that we have many guests here who were friends of Lethaby. I hope that there will be time for some of them to speak and to tell us of some of the personal things that they remember, because those personal things are very valuable. The buildings, I hope, will remain, but we had to be watchful about that, because some of Webb's buildings have already disappeared, and some Lethaby buildings are threatened with disappearance for various reasons, largely economic. A big country house is not an easy thing to own and look after in these days. The Office of Works and the Ancient Monuments Department take a great deal of interest in anything the date of which begins with '17', but if the date begins with '18' it is considered almost as a guarantee that it is only fit to be pulled down. There are quite a few buildings of the 19th century, however, which are first rate, and those of Lethaby, Webb and Norman Shaw are among them. They want watching, and it is of real importance to be vigilant in looking after them before it is too late.

Mr. J. G. Noppen, F.S.A.: I should like to add one or two personal recollections of Lethaby. I did not know Morris and Webb. We can not say too much of Lethaby's kindness and generosity. Architects ought especially to bear that in mind, because he had many very strongly-held views with regard to architecture which he kept in chain because he could not bring himself to express himself forcibly. He had not the slightest hesitation in saying that architects were people who ought to be abolished, and he said it in very forcible English. His articles appeared in the QUARTERLY REVIEW and elsewhere, but, of course, he was rather too strong in his criticism and, of course, his idea of a workman's world in which skilled masons supplied all the buildings which were needed has gone for ever.

Lethaby knew that, and knew that we were in for concrete and steel. What he wanted was to cut out all the nonsense and get down to the fact that the builder, whether you call him an architect or anything else, if he builds in steel and concrete is not a stonemason and not an architect in masonry. Lethaby wanted to get that clear, and to get architects to experiment in the use of different materials, in a practical way and for some purpose, and not merely to please the eye.

Major H. C. Corlette, O.B.E. [F]: I should like to say a word or two, as I knew Lethaby. One thing which impressed me very much about him was his vast intellectual grasp of the whole subject of architecture. Mr. Fletcher has mentioned his interest in Gothic work, about which he knew an extraordinary amount, as is shown by his book on Westminster Abbey and his enormously valuable book on Mediæval Art, which everybody ought to know and to read. Then there was his knowledge of Greek work, which was illustrated in his book on Greek buildings. In addition to that, his range was enormous. All of you who know anything of his work will realize what he did with Mr. Swainson in his book on St. Sophia in Constantinople. That in itself shows that he had a grasp which very few men had at the time.

His interest and sympathies were so vast that few of us realize their extent. The more we know about the influence that Lethaby and Philip Webb and Morris have had on the arts in every direction, the better it will be for us. It seems to me that in the work of all three of them we find that they insisted always on the value of really fine craftsmanship.

The President: I should like to express on behalf of all of us here our thanks not only to those who lent so much for the exhibition but very particularly to Mr. Waters and to Mr. Brandon-Jones for the immense amount of work which they have put in to contribute to the success of this unique gathering of the sect of the Lethabyites.

Mr. Noel Rooke (in reply): I am very grateful for the kind way in which you have listened to what I had to say. I actually wrote a good deal more which I had no time to say, but that, I think, will be printed in the JOURNAL, and will answer one of Mr. Brandon-Jones's questions. The Central School did not begin under a private committee, but before Balfour's Education Act the County was responsible only for technical education. It was run by a small committee of the County, and its members were able to recognize a good man when they saw one. After Balfour's Education Act came into force one of those strangely unforeseeable things happened. Education of all kinds was put in the hands of the County. It was a very big job, and the County decided to run it in three sections. There was an Education Adviser who was to advise the Education Committee on what ought to be done, an inspectorate to see whether it was or was not done, and an executive department to see that the ink bottles were filled, and things like that.

The education adviser needed only two or three secretaries and clerks to help him, and the inspectors required only 30 or 40 typists for their reports, but the man who was concerned with the ink pots naturally needed five or six hundred clerks. In public administration a man's horse-power is judged by the very simple test of how many clerks he employs. You therefore had here the strange situation of a man of only three-clerk-power being equal to the man who had five or six hundred clerks. That was a most untidy position, and the '600 horse-power' man could not put up with it. The first thing that he did was to see that the inspectorate should no longer have the right to address their reports to the education adviser or to the education committee, but should address them only to him, to Mr. Inkpots. There was still one more world to conquer, and the next step was to see that the education adviser should no longer have the right to address the education committee, but only Mr. Inkpots. That was partially successful, but the education adviser had such a personal reputation that it made things difficult; so it was decided that there should be no successor to him, and when he reached the age-limit Mr. Inkpots thereafter reigned supreme.

Mr. Inkpots, however, had not the mind or the background to understand a man like Lethaby, and Lethaby saw that things were becoming so dead that important matters were being settled by men of limited mentality, men with what he called 'the office-boy mind.' He decided to leave. That is why Lethaby left the Central School.

I should like to risk a summary of all three men, if only for my personal use. They had a common respect—a reverence—for Ruskin, as the explorer who, thanks to unusual sensibility, broke through into new seas of thought, and brought news of discoveries of the first importance. All three were distinguished by quite unusual uprightness and straightforwardness in their work and by its quality; and also by an almost youthful joyousness in the midst of hard thinking and hard work.

For me Morris was the finest flower of a period which had first begun long ago with doubtful Strawberry Hill Gothic; and is now almost as difficult for young people to understand as pre-Chaucerian English. He widened the field of awareness in art, which since his time has shown signs of shrinking again.

Webb built a bridge between what was left of traditional craftsmanship and the best of the present day and influences even some mass-production such as the best of the utility furniture.

Lethaby's influence on education has been great. His Central School has had more international influence than any other British school of art. He has had more influence on world thought in architecture than any other English man.

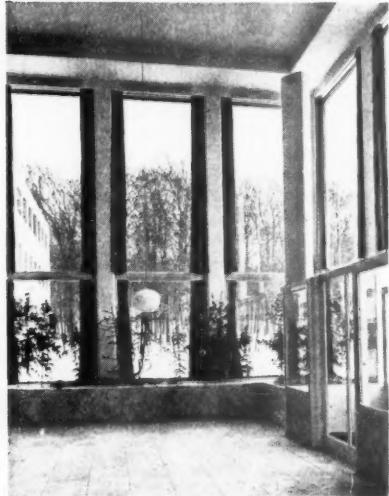
His penetration and his scholarship helped him to see further through a stone wall than any others of his time. His intuition gave him breadth. He is a man of the future, with a future.



Søllerød Town Hall, 1940-42. Architects: Arne Jacobsen and Flemming Lassen



Søllerød Town Hall. The Council Room



Søllerød Town Hall. Entrance interior



Scheme for the enlargement of Copenhagen Town Hall. Architects: Chr. Holst, Aage Holst, Emile Holst and Philip Arctander. The Town Hall, by Martin Nyrop, was built in 1905. The extension, not yet built, was the subject of a competition

Danish Architecture of Today Exhibition at the R.I.B.A. 28 February to 29 March

THE DANISH EXHIBITION has attracted a large attendance from the day it was opened by his Excellency the Danish Ambassador. This was expected because Danish architecture has a strong appeal in Great Britain. This appeal follows partly from the close similarity between the democratic institutions and outlook of the two countries, but equally from a joint love of fine, imaginative, though unsensational design based on good craftsmanship. Those British architects who have been to Denmark will doubtless agree that the photographs on view at the R.I.B.A. do not unduly flatter Danish contemporary architecture. Contrary to popular belief, not all good architecture is photogenic, particularly that which relies mainly for effect on simple forms with subtle colours and textures, as does current Danish work. Those British architects who have not been to Denmark can therefore be assured that the actual work is even better than the splendid photographs of it which they see in the exhibition. It has a quality of homeliness, of accord with the life of a truly democratic community which is in complete contrast with, for example, the showy monumental buildings shown at the exhibition of Russian architecture, two years ago.

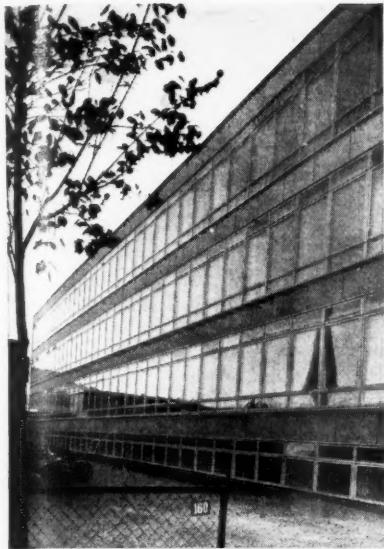
The designers of the exhibition set the R.I.B.A. something of a problem by including in their layout a suspended false ceiling which extends over a large part of the Henry Florence Hall. This problem was successfully overcome, and the ceiling, by acting as a central feature and by introducing diversity of interior void, has given the exhibition both coherence and variety.

The following is a brief report of speeches at the opening ceremony.

The President, R.I.B.A., introducing the Danish Ambassador, said Denmark and Great Britain had very close ties of friendship and a real understanding of each other's cultural background. The exhibition in 1948 of Danish Treasures of Art held at the Victoria and Albert Museum had shown what Denmark had produced in art through the centuries. The exhibition now being held at the R.I.B.A. would give British architects and the public an inkling of what Danish architects were doing to surmount the many problems with which, like their fellow members of the profession in England, they were confronted. During the war years there had been no opportunity for an interchange of views between Danish and British architects. Both countries had difficult problems to solve, problems which, however, were in many ways, similar. The solutions reached showed those happy differences which were the outcome of artists and craftsmen working for the same ideals, though in their own fields. It was therefore of the greatest importance that there should be opportunity for Danish and British architects to study each other's work.

Denmark, said the President, was suffering from shortages of materials and labour, as we were, though he believed Denmark was now building annually more houses than before the war. Danish architects probably felt frustration in certain respects, just as much as did architects in Great Britain, but one of the first lessons that could be learnt from the exhibition was how successfully Danish architects had overcome those frustrations.

His Excellency the Danish Ambassador, thanking the President, R.I.B.A., for his words of welcome, said it was his pleasant



The Dental College, Copenhagen, 1940-41.
Architect: Kai Gottlob



Above: the 'Persil' House, Copenhagen, 1940-42. Architect: Ernest Kühn. Right, above: the Biesparken flats, Copenhagen. Eight blocks designed by different architects in a scheme planned by Edvard Heiberg and Prof. Ivar Bentsen. Right, below: La Rotisserie au Coq d'Or, Copenhagen, 1945. Architect: Palle Suensen



experience in England almost always to find a ready reception for exhibitions, meetings, conferences, etc., which enhanced the progress of Danish arts and letters, and in this the R.I.B.A. was no exception. Speaking of the 1948 exhibition in London, held under Royal patronage, which the President had mentioned, he said it had done much to cement the bonds of friendship and liking for culture enjoyed by the peoples of Britain and Denmark whose climates, problems and way of life had so much in common. Architects played a big part, and would continue to play it, in the realm of culture, and Denmark was no exception to this truism. The invitation extended by the R.I.B.A. to show in its beautiful Henry Florence Hall photographs, drawings and models which were the fruition of work by Danish architects and industrial designers had been well received and much appreciated. The exhibition must speak for itself. Mr. Erling Langkilde, President of the Academic Society of Danish Architects, thanked the Danish Ambassador for opening the exhibition. It was his experience that architects all over the world had discussed in the minutest detail the important question of the technical problems of rebuilding, the rebuilding of war-damaged areas, the rebuilding of the capacity of the building industry itself, the rebuilding of the housing situation, and the rebuilding of the people's standards of living. However important were these aims, he felt that in pursuit of them there was rather too great a bias towards technical building research. No doubt this was the natural outcome of keeping one's eye on what might be termed the material aspect of the problems and no doubt it was the most useful currency for architectural international exchange. Nevertheless it had to be admitted that this particular kind of exchange had not succeeded in achieving standards which were readily

exportable from one country to another. Each country had still, he said, its own and its characteristic conditions forming the submerged part of that huge iceberg, architectural scientific research. It was necessary to realize that building research, however important and indispensable it might be, could never give anything but a negative art.

Architecture had always had to rely on artistic intuition and on ideals of form. If building research could be subjugated to some extent to an architect's intuition for what was right, what was practicable, what was noble, then an exhibition such as had just been opened, was a valuable link. In the exhibition were photographs of buildings which were practicable demonstrations of architects' ideals.

The exhibition had been brought to England with humility and self-criticism. Danish architects knew they were not in a position to lay down a dogma about architecture, or in anything else for that matter. They knew their buildings lacked the brilliance of many other countries' 'showpieces.' They had, however, in Denmark, no fighting opinions between architects, no battles of the styles, only an inherent desire to achieve a common good and a human atmosphere, hand in hand with improved housing conditions in everyday life.

Mr. Ole Hagen thanked the R.I.B.A. Exhibition Committee for its help and courtesy in arranging the exhibition, particularly Mr. H. V. Lobb and Mr. Jefferiss Mathews who had been to Copenhagen about the preliminary arrangements; he also thanked Sir Charles Hambro, President of the Anglo-Danish Society, for giving his patronage.

Mr. H. S. Goodhart-Rendel, Chairman of the R.I.B.A. Public Relations Committee, said it was regrettable that for eight or nine years architects in this country had known so little of what the Danes were doing in the progress of their art. He recalled his early impression of Danish architecture from an illustration he had seen many years ago of Copenhagen town hall. In his student days he had been charmed with what were then revolutionary designs in Danish furniture. Between the wars, Danish architecture had held a strong place in the heart of British architects. It was symbolic that Denmark had sent England her loveliest queen, that a Danish author had given English children their prettiest nursery-stories and now, in the exhibition, could be seen architecture which inexplicably transmuted to the spectator a sympathy and an understanding, which could not easily be put into words, but which, through adhering to no particular sect or text-book name, was nevertheless fine architecture.

Institute Affairs: For Members Only

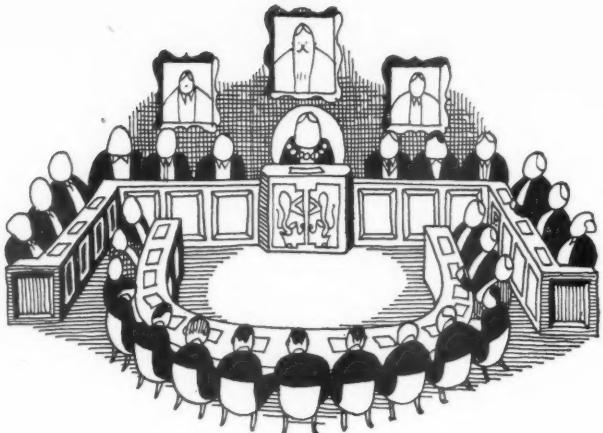
THIS IS THE FIRST INSTALMENT of a new JOURNAL feature to give members more information about the activities of the Council and Committees than is contained in the usual formal announcements. This feature is not a substitute for 'Notes from the Minutes of the Council' but a commentary on and an explanation of current activities which is being prepared by a group of committee members, one in each committee. Periodically they will submit notes on what their committees are doing so that the Editor can co-ordinate the notes for publication in alternate months during the session.

What does the R.I.B.A. do? For some time past there has been a demand from members, particularly those provincial members who are not in regular touch with Portland Place, to be told more about 'What the R.I.B.A. does.' This is not quite so easy to do as it sounds. Many matters considered by the Council and Committees can not be talked about freely in their early stages. No committee, preparing a report for submission to the Council can, by prior publication of findings or suggestions, prejudice the Council's ultimate action. The Council itself, in some instances, can not make public its negotiations with Ministers of the Crown on matters that are confidential to the Minister concerned or are his prerogative to announce. Also the proceedings of a few committees, such as the Professional Conduct Committee, must always remain confidential.

When this scheme for giving information to members was first considered, many took the view that these difficulties would make the scheme either unworkable or the feature would hardly be worth reading. As one committee chairman put it: 'Indiscretion is the life blood of the columnist.' Nevertheless the Council, having thrashed the matter out, decided that a serious effort should be made to meet the demand from members for more information. Even if the full story could not be told there was much that could be said. Also hardly any matters remain permanently confidential, so that after negotiations have been concluded, members can be told what has been done, why and how.

Therefore this JOURNAL feature is now launched. To some extent it is experimental. We shall do our best to make it of real interest to members. The effort to 'put members in the picture,' more than has been the practice in the past, is certainly worth making.

An Unexciting Session. Unfortunately—or is it fortunately?—there are no burning topics to be discussed at the present time. The Royal Institute is not engaged in any



exciting external campaigns, nor are there any violent internal stresses in the architectural body politic to be resolved. The work of the Council and Committees at present is mainly one of consolidation, the tying of loose ends and the organization of the Institute in terms of its expanded post-war size. The Danish Exhibition is almost the only exceptional event in an otherwise calm session.

The chief item of direct news interest to members is that the Committee on Private Practice, of which the chairman is Sir Percy Thomas, has its report to the Council in draft. This report is the culmination of a vast amount of work which included the questionnaire to members and its complicated analysis. The findings and recommendations of the Committee will be awaited with interest.

Our new Honorary Members. We should congratulate ourselves upon the acceptance of nomination for election as an Honorary Fellow by the Viscount Esher, M.B.E. [Hon. A]. Lord Esher always has been actively interested in architecture and has taken a leading part in the work of a number of amenities societies. He has been President of the London Society, and of the Society for the Protection of Ancient Buildings. At present he is President of the National Council of Civic Societies and of the Architecture Club.

We also welcome Mr. Hugh Montgomery who has been nominated for election as an Honorary Associate. The services of Mr. Hugh Montgomery and of his father, Mr. H. Greville Montgomery [Hon. A], in organizing the Building Exhibition for many years past are well known as is also their great generosity in connection with the Architects' Benevolent Society. So far as is known, never before have father and son been Honorary Associates at the same time.

Hurstmonceaux Observatory. Members will note with satisfaction that Mr. Brian O'Rorke, A.R.A. [F] has been appointed consulting architect for the new observatory at Hurstmonceaux. It will be remem-

bered that the castle and its grounds were acquired by the government for an extension to Greenwich Observatory. The first new buildings erected there were of necessity 'austerity' and the Council felt that there was some risk of a piecemeal development of what should be a well-planned and well designed national observatory. The Council therefore expressed to the Admiralty their anxiety on this score; this latest decision is a gratifying response to Institute representations.

Production and Architects. At the invitation of the Ministry of Works the Institute has appointed representatives to Building and Civil Engineering Regional Joint Production Committees. The work of these Committees has previously been referred to in the JOURNAL, but it may be a convenience to remind members that these meetings will be convened by the Ministry of Works at the following centres: Newcastle, Leeds, Nottingham, Cambridge, London, Reading, Bristol, Cardiff, Birmingham, Manchester and Tunbridge Wells. Their work will be associated with that of the National Consultative Council and presumably each Regional Committee will be dealing with the same type of problem as the N.C.C. but at regional as opposed to national level.

Scales of Fees and the Code of Professional Conduct. The goal of the Practice Committee, unlike that of its members, is its own winding-up order. One day, it hopes, a Code, a Scale and a few forms will guide every architect through the routine and emergencies of practice and will allow him and the Committee members to proceed comparatively unworried with their real business. Meanwhile, each Ministry, Commission, Board, Council or Executive demands to negotiate its own particular scale of fees, legal luminaries profess themselves uncertain of the meaning of long accepted phrases, aged architects question the propriety of long established practices, and the Committee tries to pick its way forward through fogs and forms and to light the way for others.

But the new Code of Professional Conduct, which each member will soon receive, will not tell the newly qualified one whether he can accept an agency which an insurance company flatteringly offers with its congratulations. Nevertheless he can do so—provided he informs his clients of his interest when recommending the employment of that company. This decision needs explanation: it, but not the proviso, is based upon the precedent of the Law Society's rules for its members.

The Meaning of 'Quantum Meruit'. Precedents are not always sound and a recent decision confounded one that long ago gained general acceptance. Mr. Justice Birkett, giving judgment in a case which turned upon the meaning of 'quantum meruit', made it clear that he did not consider that this could be assessed upon a time basis alone. The implications of his conclusions have been summarized in a note which, if approved by the Council, will be added to the Scale of Charges to amplify the two contentious words. The note merely describes the factors to be taken into consideration in assessing work on a quantum meruit basis, and, though it is unlikely to reduce litigation on the question, its critics may take comfort from the knowledge that the architect plaintiff in the case in point was awarded a sum greater than he might have obtained had his fees been assessed upon the normal time basis.

Forms of Contract with Clients. To 'fulfil a long felt want' the Practice Committee has prepared some typical forms of contract for use by architects with clients. These forms, if approved by the Council, will be printed and made available to members or to the public. They are in a simple form which should be adequate for most occasions whether the practising architect is employed by public authority or private client. The clauses of the contract are few and, wherever possible, the standard scale, which would need to be attached to the contract, is referred to. Decorated as they will be with the Institute's badge, it is hoped that these forms will find wide use and may even be sufficiently impressive to satisfy all but the most stubborn of town clerks.

Income Tax Relief. It should be well known by now that income tax relief can only be obtained for subscriptions to professional institutions if it can be proved that membership is a *continuous* condition of employment. A certificate from an employer is usually sufficient proof. It may be difficult to obtain this certificate when the subscription to the R.I.B.A. is concerned, but the Annual Retention Fee to A.R.C.U.K. is a different matter, or should be. It was therefore with considerable surprise that the Salaried and Official Architect's Committee learned that at least one employing body had declined to certify that it is necessary for a salaried architect member of its staff to remain on the Register.

Without the certificate, income tax relief is not granted on the registration fee of £1. The taxpaying architect so affected can presumably cease to remain on the Register

and his employers will pay him just the same. But what do they pay him for? Once he is off the Register he is no longer an architect. As there are thousands of salaried architects likely to require this certificate the Salaried and Official Architects' Committee is trying to bring about uniformity of policy in the granting of these certificates by employing authorities.

The Scale of Salaries. The Salaried and Official Architects' Committee has been concerned for some time about the difficulties experienced by the R.I.B.A. Negotiating Officer when negotiating conditions of employment with machinery which appears to be inadequate. The existing machinery is to be overhauled. An essential item in this machinery which receives periodic examination is the Scale of Salaries. Recent considerations of the Scale have made it fairly clear that a scale to be complete should apply to all architects who receive their remuneration by salary and not by fee, and should apply to teachers of architecture as well as to other branches of the profession. A preliminary examination has shown that there is not as much consistency in the rates of pay granted to teachers as could be desired. At present they are neither consistently good nor consistently bad. The Committee is studying the whole subject.

Restriction on Changes of Employment
Many of the younger salaried members of the profession are apparently finding current conditions opportune for varying their experience and spheres of activity. They are prone to change their jobs very frequently. Some employing bodies do not like it, and would if they could restrict such movements.

As noted in the December JOURNAL, the Council strongly upholds the right of an employee to move if he wishes and although it recognizes an employer's desire to keep a staff reasonably stable, it insists that any restrictive action should be reciprocal. If an employer wishes to impose a minimum period of employment of say two years, then there should be a reciprocal restriction upon the employer preventing the dismissal of the employee during that period—subject of course to good conduct. Meanwhile the Salaried and Official Architects' Committee is keeping a look-out for cases in which unilateral restrictions of this kind are being attempted by employing bodies. Members should report any such cases to the Secretary, R.I.B.A.

The Hospitals Committee. The first major task tackled by the newly constituted Hospitals Committee under the chairmanship of Mr. C. G. Stillman [F], has been the preparation in consultation with the Practice Committee of a basic agreement between Regional Hospital Boards in England and Wales and architects in private practice, with a view to facilitating close co-operation in the carrying out of a large hospital building programme.

A memorandum setting out basic items which could be incorporated in agreements by any of the Regional Hospital Boards without detriment to their individual

capacity as autonomous bodies under the National Health Service Act 1946, has been approved by the Council. Full consideration has been given to the relationship between the private architect and the architect to the Board.

Broadcast Talks on Architecture. Some recent broadcast talks on architecture have been the subject of discussion by the Public Relations Committee. Several indignant letters about them had been received from members, many of whom appeared to think that the R.I.B.A. had been directly responsible for the talks. The P.R. Committee, realizing fully that the B.B.C. is a body that is rightly not amenable to pressure from outside bodies and is strong minded enough to choose its own subjects and speakers, agreed that broadcast discussions on architecture were in themselves good for a proper public understanding of it, even if some listeners disagreed with some of the things said.

The R.I.B.A. gives advice and help to the B.B.C. when asked for it—as frequently happens—but can exercise no control over what is finally said; nor should it do so. The R.I.B.A. could never set itself up as a censor of members' opinions, whether spoken or written, and it should be understood that members give broadcast talks in purely personal capacities. The proper target for any justifiable complaints is the B.B.C. and not the R.I.B.A. Nevertheless if anything were ever said about architecture or architects which was flagrantly untrue, no doubt the Council would take the matter up officially with the B.B.C., but opinions are the speakers' own concern. The Public Relations Committee closed discussion of this matter by agreeing that free discussion on the air about architectural matters was a good thing—the more the better—and that it would continue to give the fullest help and advice to the B.B.C. as occasions arose.

The Journal: Service to Members. The Council has sent to the Editor of the JOURNAL an expression of appreciation of his work, and that of his staff, on the report of a recent extensive survey of the opinions of members on the JOURNAL in its present post-war form. The purposes of the survey were to find out whether the majority of members now read the JOURNAL, to find out their preferences in regular JOURNAL features and to give the Editor general guidance on JOURNAL policy.

The conclusions reached from the replies were: the JOURNAL is generally read and appreciated by members; the present JOURNAL policy is on right lines; interest in reports of Institute activities is less than in the technical contents; the present cover design and general format are approved by the great majority of members; the advertisement pages are studied by a high proportion of members; no radical changes are necessary to meet members' views.

The Institute is indebted to the many members who not only took the trouble to fill in the questionnaire sent them but who, in very large numbers, made detailed suggestions for future improvements.

Developments in Timber Technique

By R. T. Walters, A.M.I.Struct.E. [A]

Read at a meeting arranged by the R.I.B.A. Architectural Science Board, 14 February 1950. David Booth [F] in the Chair

INTRODUCTION. The scientific study of a traditional building material may, at first, only confirm what is already known. Later, as it becomes the source of fresh data, it may lead to the development of new techniques. However much the architect may welcome research of this kind, he is left with the problem of assessing its value in his own work as a designer. Having learned of its existence, he wants to know how far it helps to overcome current difficulties, and to what extent it offers new opportunities for design.

The current difficulty principally associated with timber is its scarcity. Here the results of recent research can be a great help. Where the problem is to make the best use of a limited supply the only certain method lies in the application of structural theory to the choice of sections. This we may call the technical approach. The techniques now available also offer new opportunities to the designer of buildings. Since this is largely a matter of appreciating the characteristic structural forms deriving from the new techniques, we may call it the visual approach. Before we discuss these methods of approach in detail there are a few general observations to be made.

In *Technics and Civilization* Lewis Mumford shows that timber was the predominant material in technical developments from the 10th century until the end of the 18th century. It was in fact used to provide many of the prototypes for the period of rapid technical progress which took place during the 19th century. The Industrial Revolution introduced the mass-production of both iron and steel, during which time the foundations were laid for the theory of structures applicable to those materials. Timber, however, was not studied in the light of this new knowledge, and during the first decade of the 20th century it was still being used in accordance with the same rule-of-thumb methods of design which had become established during the preceding centuries.

During the last forty years intense scientific study has resulted in a delayed industrial revolution as far as timber is concerned. The incentive was economy, both in forestry and utilization. This had nothing to do with a dollar shortage, but was partly due to the strategic importance of the material, made evident particularly during the first World War. Research laboratories were set up in America in 1910, in England in 1925, and in many other countries of the world thereafter. On a global basis the supplies of timber have been shown to be inexhaustible, if

the task of re-afforestation is properly undertaken. As far as structural utilization is concerned the scientific study of the material has produced a wealth of new knowledge which can now be seen to fall into three categories, as follows: (a) The ability to determine the mechanical properties of timber by visual inspection of its natural characteristics. (b) Greatly improved methods of jointing, which include the invention of timber connectors and modern adhesives. (c) The establishment of the modifications required to enable normal structural theory to be applied to the material.

TECHNICAL APPROACH. The technical approach to timber design is made comparatively simple because the essential data required have already been published in this country. Most of the information relates to softwoods, but the data on hardwoods are rapidly expanding. The economical use of timber depends on treating it as a material of engineering, and this may tend to complicate the work from the architect's point of view. But the calculations required for the simplest type of structure should not overtax the average architect's office and mastery of them may save a great deal of time and trouble.

Loading Conditions. Firstly, there is the question of assumed loading conditions. In the case of structural steelwork British Standard 449 includes recommendations on this subject. For timber, however, no such document is available, and current procedure is to work to the recommendations of another B.S.I. publication—*The Code of Functional Requirements of Buildings*, Chapter V—'Loading'.¹ This work contains similar recommendations to B.S. 449, and represents the most up-to-date thought with regard to the probable effect of snow, wind and other loads on buildings.

Safe working stresses. The next step is to decide on the safe working stresses which may be applied to the timber. If expert assistance is available in the selection of the material the architect's specification need only refer to the appropriate structural grade as defined in British Standard 940 : Parts I and II.² and ³ The grading rules in this document however are not at present applied to timber which is commercially available in this country. The situation in America is somewhat different, where it is possible to buy timber which has been graded either for strength or for appearance, as required. In the absence of grading

facilities certain assumptions have to be made about the strength of the material. It has been found that most of the softwood commercially selected for carcassing purposes in this country is at least as good as the 800 lb. f. grade laid down in B.S. 940: Parts I and II. The following basic stresses may therefore be assumed for softwoods: safe working stress in tension, bending and compression parallel to the grain 800 lb. per sq. in.; safe working stress in compression perpendicular to the grain 190 lb. per sq. in.; safe working stress in shear parallel to the grain 70 lb. per sq. in.; modulus of elasticity 1,200,000 lb. per sq. in.

Care should be taken to avoid severely sloping grain, and members containing knot clusters should be excluded. In general such material may readily be drawn from the unsorted and 5th qualities of European Redwood and Whitewood and merchantable qualities of Douglas Fir, Western Hemlock and Sitka Spruce. The stresses given are, of course, very low, and much higher values may be taken for the same species if the material is suitably graded.

Increase factors. Basic stresses for timber are applicable to conditions of permanent loading, and may be substantially increased if part of the load is of a temporary nature, i.e. due to snow or wind. For beams they may be multiplied by 1.15 for a combination of dead plus snow load, and by 1.2 for a combination of dead plus wind load. On the other hand they should be multiplied by 0.85 if the timber is occasionally wetted and re-dried, and by 0.70 if it is continuously exposed to damp conditions.

Tolerances. Given the loading conditions and the basic working stresses of the material, the design of a simple component such as a beam presents no difficulty. In finding the section modulus of a rectangular member it should be remembered that sawn timber does not always measure its full nominal size. British Standard 1175: 1944⁴ sets out the permissible minus tolerances which may be assumed, as follows: Dimensions up to 1 in., $\frac{1}{16}$ in.; over 1 in. but up to and including 2 in., $\frac{1}{8}$ in.; over 2 in. but up to and including 8 in., $\frac{1}{8}$ in.; over 8 in., $\frac{1}{4}$ in.

Sources of data. Perhaps the most important and useful document of all is another B.S.I. publication—the draft British Standard Code of Practice *The Structural Use of Timber in Buildings*.⁵ This work contains the essential data required in the design of all but the most complex timber structures. It assumes the use of established structural theory and provides the modification factors by which that theory may be applied to timber. In truss design, for instance, the forces in the members are found by the usual graphical or mathematical methods. The Code describes the simple calculations needed to choose the correct sizes of tension and compression members. It also contains the safe loads and limiting factors which govern the detailing of joints using modern methods of connection. The recently published

book, *An Introduction to the Design of Timber Structures*, by Phillip O. Reece,⁶ is a valuable guide to the use of the Code in the design office. Reference may also be made to an American work, *National Design Specification for Stress-Graded Lumber and its Fastenings*, published by the National Lumber Manufacturers' Association, of Washington.⁷ Whether the problem is the design of a simple floor or a complicated framed structure, it will generally be found that the use of these references results in substantial economy as compared with traditional methods of design.

Mechanical Connections. Also necessary to the design of an efficient timber frame is some knowledge of the design of joints. In this respect modern timber frames are essentially different from traditional timber structures. It would appear that the design of joints in compression presented no difficulty to traditional builders, who developed many ingenious and successful techniques for such joints. Joints in tension, however, presented them with a problem to which they found no adequate solution. The result has been a striking absence of properly-triangulated timber frames among their work. There is room here for an interesting historical study, but it will generally be found that whether by instinct or by knowledge the traditional builder designed his load-bearing timber structures, particularly roofs, in such a way that the majority of the important joints were in compression. This led to the development of architecturally interesting roof designs such as the hammer-beam roof, but it placed a severe limitation on the size of the clear span which could be covered.

The solution to the problem of the tension joint was first found in the Kübler dowel developed in Germany before the first World War. This type of 'surface dowel' has since been used as the basis of all modern timber connectors. In every case the purpose of the connector is to transmit the load from one member to another through a greater area than is possible by the use of traditional methods, i.e. bolts, nails or screws. Moreover, the transference of the forces in connector joints takes place at the interfaces of the members, where it has been shown that the intensity of stress is highest. The various types of connector which are commercially produced have been described in detail elsewhere. Their greatest development has taken place in America, but they are also widely used in many European countries. In Great Britain at the present time only two types of connector are marketed, the Bulldog toothed-plate connector and the split ring. In the case of the Bulldog connector no reliable foreign data are available, and extensive tests have been carried out and are continuing as the result of collaboration between the Timber Development Association and the Forest Products Research Laboratory. Safe working loads and limiting dimensions for the use of these connectors have been published, and the application of them in design is a comparatively simple matter.

Bulldog timber connectors are made in three common sizes, 2 in., 2½ in. and 3 in. diameter, and are normally holed for use with ½ in. diameter bolts. They are made double-sided for wood-to-wood connections, and single-sided for wood-to-metal connections. In the case of wood-to-metal joints, since the load from the metal plate has to be transferred through the bolt to the connector the single-sided Bulldog connector is provided with a small raised collar round the bolt hole, to increase its bearing value.

It is interesting to make a comparison between the load-bearing capacity of Bulldog connectors used in conjunction with bolts, and of bolts alone. In certain cases, principally joints loaded parallel to the grain, the advantage gained by using connectors is slight. In most framed structures however, members meet at a joint at various angles. It will be found from the Code of Practice that the safe working values of bolts alone decrease rapidly when the load is at an angle to the grain. In such cases Bulldog connectors will be found to be much more efficient. Moreover in tension joints the use of bolts alone calls for rather long end distances, that is to say there must be a substantial amount of timber between the bolt and the end of the member in order to prevent the tendency of the bolt to shear out at the end. In Bulldog connector joints this tendency is much less marked, and the end distances can be correspondingly shorter. In truss design, and particularly where suspended ceilings have to be fixed, this will be found a considerable advantage.

The assembly of joints with Bulldog connectors can be carried out by the average building operative. By specifying washers larger than commercial size and made from ¼ in. thick mild steel the embedding process can be carried out in most softwoods without danger of the washer becoming pressed into the timber. For denser species a special high-tensile bolt can be provided by the manufacturers of the connector, used in conjunction with much heavier washers. In such cases the high-tensile bolt is removed after the embedding process and is replaced by a normal commercial bolt.

The split ring connector has recently come into production in this country, and is at present available in the 2½ in. internal diameter size used with ½ in. diameter bolts. Per connector, split rings are far more efficient than Bulldog timber connectors. They are, however, somewhat more expensive, and it is necessary to cut grooves in the members to be joined to allow the insertion of the rings. These grooves are normally made by means of a special cutting block fixed above the drill which cuts the bolt hole. This block is fitted with cutting knives and a stop, so that the groove is cut to the correct diameter and the correct depth. The ring is tapered in cross-section to facilitate insertion, and is split in order to ensure that it comes into full bearing when the joint is loaded. Very comprehensive data are available from American sources on split ring connector

design. The loads which split ring connectors will carry are affected by the species of timber used, the direction of the load in relation to the grain of the member, the width and thickness of the members to be joined, the end distances, and whether the load is in tension or compression. Some study of these data is required before split ring connector joints can be designed with confidence, but the general procedure is not dissimilar to the detailing of a bolted or riveted joint in steelwork. Split ring connectors can only be used for wood-to-wood joints. Their counterpart for wood-to-metal joints is a shear plate, which is not at present available in this country. Other types of connector commercially available in the United States are claw plates and spiked grids, used for the heavier type of timber construction. Full design data on the use of split rings, shear plates and claw plates are included in the draft British Standard Code of Practice referred to above.

In addition to the development of timber connectors, a scientific investigation has been made of the strength of joints using more traditional types of fastening such as nails, screws and bolts. The essential design data applicable to these fastenings are contained in the draft British Standard Code of Practice. It will be found that considerations such as the thickness of the member, end distance, edge distance and spacing all have to be taken into account, and in order to guarantee the strength of such joints, working details should be produced setting out the exact positions of the fastenings. Nails are particularly worthy of investigation because they are much cheaper to make and use than any form of connector, and quite often provide adequate strength for lightly-loaded components. It has been found that if holes for nails are pre-bored about four-fifths of the diameter of the nail, they may be spaced much closer together without danger of splitting the timber. It is generally the minimum spacing of the nails which governs the design of the joint, since in most cases the difficulty is to insert enough nails into the contact area between the members to be joined. The existing data are mostly based on the use of ordinary round chequer-headed wire nails in standard gauges and lengths. Various processes have been tried for increasing the resistance of the nails to withdrawal. Among these is the technique of coating the nails with cement slurry which is allowed to dry before the nails are driven, and another method is to coat the nails with glue, which is allowed to set after the nails are in place. This latter method, although costly in practice, produces remarkable results.

Lamination. We may now proceed to discuss some of the technical aspects of laminated timber construction, which has been substantially developed in recent years. Lamination is simply the extension of a very old technique into the field of structural components, taking advantage of the greatly improved adhesives which are now available. The types of glue most widely used for laminated structures are

the caseins. Research and practical experience have proved them to be perfectly satisfactory for normal protected positions where the moisture content of the timber does not rise above 20 per cent. They provide the essential feature of any adhesive used in laminated work, namely, that the glue-line shall be at least equal in strength to the timber in horizontal shear. The casein glues, which are made from sour milk derivatives, are reasonably cheap and easy to handle. Their disadvantage is that they lose strength when they become wet. In spite of their organic nature they are remarkably resistant to attack from micro-organisms and chemical fumes, and can be reinforced with suitable toxics if necessary.

For all conditions where high moisture content is likely to be encountered one of the synthetic resins should be used. Data at present available indicate that the phenol and resorcinol formaldehyde types are the most durable and are completely impervious both to moisture and to decay. The urea-formaldehyde group has so far provided durability figures somewhere between the phenol and casein types of adhesive. As the properties of adhesives improve, however, they tend to become not only more expensive but more sensitive to the shop conditions in which they are used. It is essential that they should be handled in accordance with the makers' instructions, and owing to the fact that their pot life is often limited they should be applied by skilled and reliable operatives.

Structural components may be laminated either vertically or horizontally. Vertical lamination is most applicable to straight columns or beams in which a greater length or cross-section is required than is obtainable from solid timber. In the case of vertically laminated beams the safe working stresses for a given grade of material may be substantially increased, due to the fact that the incidence of defects which reduce the strength of the member is decreased. Similar increases in stress may be applied to members subjected to either pure tension or compression.

A horizontally laminated beam, on the other hand, will not provide the same increase in stresses. Since the top and bottom laminates are critical there is the same probability of knots or other defects occurring that there would be in a solid member. At the same time it is permissible to use a lower grade of material for the laminates in the centre of the section, since these are less highly stressed.

Briefly the technique of horizontal lamination is as follows: the individual laminates are first sawn and then planed to the correct size. They are then joined end-to-end, generally with a simple glued scarf joint. The next process is to pass the laminates through a mechanical glue-spreader and to assemble them on a jig made to the exact concave profile of the component. The laminates are built up, one on top of another, dry and unheated, with the glue applied. Pressure is then provided by means of suitable clamps, of between 100 and 200 lb. per sq. in., and the component is left until the glue sets. There-

after the component is removed from the jig, its surfaces are finished and a moisture seal is applied.

The design of laminated components is extremely interesting, and one or two general points may be noted. Firstly, the theoretical analysis of forces is made in accordance with normal structural theory. If the component is statically determinate, for example a three-pinned arch, it is possible to set up, on a basis of coordinates, the calculated cross-section required in accordance with the controlling loading conditions. In other cases it is necessary first to assume a cross-section and then to check it by calculation. Safe working stresses for laminated construction are obtainable from American data. These safe working stresses are given for conditions of permanent load and have to be modified by a number of factors. The factors provide for conditions where part of the load is of a temporary nature; they also vary the stresses according to the radius of curvature, the depth of the cross-section in relation to its width, the conditions of manufacture and the conditions of service.

One of the attractive features of laminated construction is that the components may be tapered to comply with structural or aesthetic requirements. It is generally advisable to maintain a batch of laminates running continuously from one end to the other at the top and bottom of the section. A common procedure therefore is to build up a series of laminates on the jig and to curtail them in the manner familiar in steel plate girder design. The curtailed laminates are then planed off to provide a smooth surface, to which the additional laminates are added. Owing to the extra labour involved, however, the tapering of laminated components adds considerably to their cost.

The choice of material for laminated work should be carefully gauged in accordance with the function of the component. It is unnecessary to use completely clear and straight-grained timber except in very exceptional circumstances, but it is also a fallacy to think that lamination can provide a structural outlet for material which is so poor as to have very little other value. In practice the presence of very large knots and other defects makes machining more difficult, it also makes the laminates less easy to bend, and imperfect glue lines are liable to result. Generally speaking, laminated construction calls for grades similar to those used in normal framed timber construction. With judicious selection, laminates can be sorted in such a way that the presence of knots does not detract from the appearance of the finished component.

At the present time it has not been found possible to laminate any member as cheaply as it can be made in solid timber. Lamination must therefore be justified by the fact that the particular shape and size of the component can not be obtained in any other way. On the other hand the use of laminated members has sometimes obviated the need for a suspended ceiling and has

been known to result in an over-all reduction in the cost of a building.

VISUAL APPROACH. Comparative lightness. When we examine modern timber structures from the point of view of their appearance, the most striking feature is the comparative lightness of the members. Generally speaking, traditional timber components are far too heavy for the work they have to do. It may be held that the average 16th century half-timbered house is an aesthetically satisfactory structure, and it may be that this type of construction represented one of the most economical forms of building in its own epoch. By present-day standards, however, such structures must be considered far from economical. The same is true of many of the designs for timber trusses still taught in our schools of architecture and building. A comparison between any traditional king-post roof truss and a modern trussed rafter designed to do approximately the same work will make this clear. It must be considered unlikely that we shall ever return to conditions which allow the excessive use of a basic structural material. There is reason to believe that the lighter form of timber component will gradually become more commonly used, and will in time create its own tradition.

It will be found that the new techniques are producing structures of two distinct types, depending on the method of jointing used. The use of timber connectors tends to produce the type of triangulated frame which has become so familiar in steelwork. The use of adhesives in laminated construction, on the other hand, tends to produce curved members such as arches and members which rely on continuity in their joints, such as portal frames. The visual approach may therefore be discussed from these two points of view.

Characteristics of modern timber frames. Modern timber frames are nearly always arranged so that the centre lines of members intersect at the joints. In fact any of the bracing systems used in steel-framed components may be applied to timber frames. In the case of simply-supported trusses however, it will be found that the Belgian or Pratt types are preferable to the Fink lay-out, because they produce much simpler joints. Depending on the span and the pitch, the members are best arranged so that the angles between them are neither too flat nor too steep, and a useful device is to place the struts so that they are set off from normal to the rafter by an angle equal to half the pitch.

Furthermore, it is desirable that members meeting at a joint should be in different planes. In this way one or more bolts may be passed through all the members with a suitable number of connectors provided at the interfaces. It is therefore quite usual to make the rafters and main tie of a truss of two members each with a space between them. The ties may then lie in the middle, and the struts may be made double and placed on the outside. Such an arrangement makes the truss easy to fabricate and erect.

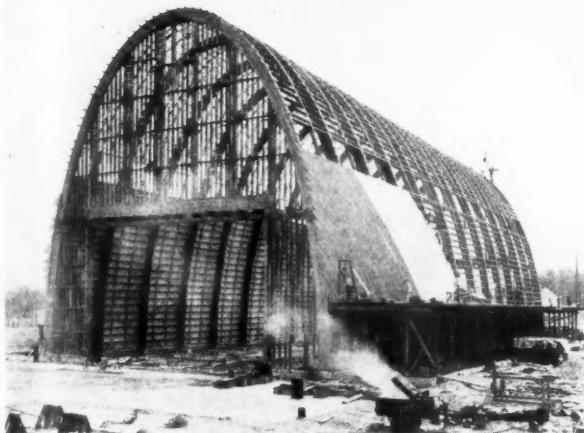


Fig. 1: Radar test laboratory, Dayton, Ohio, U.S.A.



Fig. 2: Interior of a theatre, U.S.A.

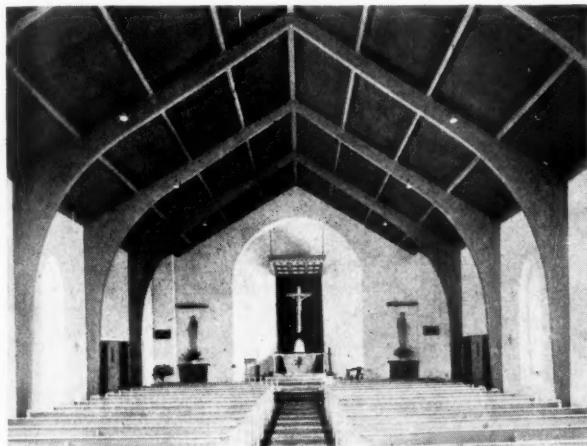


Fig. 3: Church of St. John the Baptist, Hugo, Minneapolis, U.S.A.



Fig. 4: 232 ft. span bowstring truss, U.S.A.

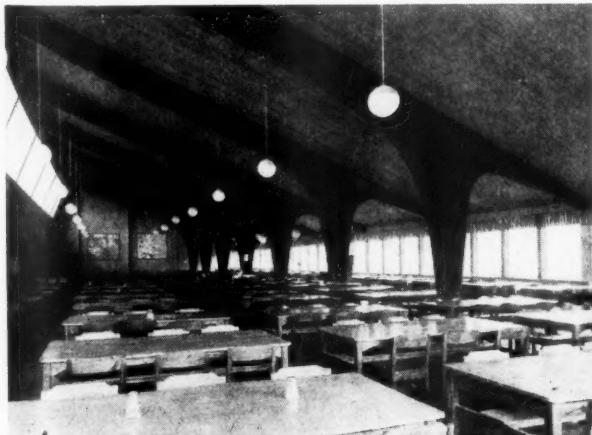


Fig. 5: Army mess hall, Ulriksdal, Sweden. Töreboda construction.
Architect: B. Karlen



Fig. 6: School at Copenhagen. Architect: V. Jacobsen

It is not as simple to design gusset plates in timber as in steel, due to the fact that it is difficult to obtain timber in sizes wider than 11 in. and that the timber is weak in horizontal shear and should never be loaded in tension at right angles to the grain. Investigations are being made into the use of plywood gusset plates, but these have not been carried sufficiently far to justify general application of plywood for this purpose.

As far as lattice girders are concerned the same general considerations apply. It will be found quite simple to design the normal 'N' type of girder in timber with the diagonal members either in tension or compression. Should the design call for a counter-braced girder this again presents no difficulty. The normal type of analysis involving the superimposition of loads derived from two stress diagrams is applicable.

Framed timber trusses and girders are not aesthetically interesting as a rule. This may be due to the fact that there is no obvious visual distinction between tension and compression members. The same, of course, is true of the normal steel-framed truss or girder, where rolled steel angles are used throughout. Some of the earlier designs of steel trusses, in which rods were used for tension members, and angles, channels or H-sections for compression members, are more attractive to look at, especially when the joints were carefully designed. This differentiation between the structural function of members is, however, lost in modern trusses.

It is perhaps only the larger type of framed structure that begins to be visually interesting, and this is not due so much to the arrangement of the framing members as to the overall shape given to the building. For instance, the timber storage building recently completed at Shoreham-by-Sea is entirely a framed structure, but is pleasing in appearance, due to the continuity between the transverse girders and the main columns and the overall shape of the frames, arrived at through consideration of the covering material and the function of the building. Similarly the parabolic profiles of the Blimp hangars built by the U.S. Navy during the war and the tall slender outlines of timber radio towers are visually attractive, although they consist essentially of large numbers of simply-triangulated frames.

Characteristics of glued laminated structures. The use of lamination, on the other hand, does tend to produce components which are immediately interesting in appearance. The Americans, who began a serious study of lamination in 1935, have not only mastered its technique but have produced the most dramatic examples of its application. Special stimulus was provided during the last war by the service departments, particularly the U.S. Navy, who commissioned many large timber buildings when steel was in short supply. (Fig. 1.)

For large spans where clear headroom is required, the predominating forms are parabolic or segmental arches. Site joints

are provided where necessary, but the components are normally shop-fabricated in sections which are as large as possible. Due to the high strength-weight ratio of timber, erection is simple when compared with corresponding units in other materials. In America it is now almost standard practice to cover the arches with close boarding laid on purlins at about 2 ft. centres. The boarding, which is often placed diagonally, is protected with waterproof felt. This type of construction provides an immensely strong and rigid building.

The curved shapes of laminated components lend themselves naturally to interesting interior treatment. Designers often prefer to leave the structural members exposed, generally in their natural colour. The best procedure is to apply the surface treatment, for instance, wax or clear cellulose, in the fabricating shop, after which the whole component is wrapped in waterproof paper before dispatch. Except at the connections, the paper remains in place until the building is completed, thus assuring a perfect finish. Portal frames, particularly of the three-hinged type, lend themselves readily to lamination. In general however, the radius of curvature at the knee will be much less than that of a parabolic or segmental arch. Care must then be taken in selecting the thickness of the individual laminates, since they should not be bent to a radius less than 100-150 times their own thickness. Sharper radii therefore need more laminates and produce a more expensive component. (Figs. 2 and 3.)

The modern bowstring truss, developed in America, is interesting technically as well as in appearance. It consists of a curved laminated top chord with the main tie and bracing members of solid timber, the joints being made with timber connectors. It is thus a unique and satisfactory combination of the framed and laminated techniques. Mostly used for industrial buildings, the bowstring truss is efficient and economical, particularly for large spans. Assembly is simplified by making the top chord and main tie of two members each, so that the bracing may be fixed between them. The largest bowstring trusses so far constructed have a span of 232 ft. and a particularly attractive arrangement of members. They rest on heavy pin-jointed supports, made integral with the steel heel strap which transfers the thrust of the top chord to the horizontal main tie. (Fig. 4.)

Several Continental countries, led by Sweden, have accepted lamination as an architecturally useful technique. So-called 'Töreboda' construction uses I-section members as compared with the plain rectangular section of most American examples. The horizontal laminating process is however similar. The firm at Töreboda have been in continuous production of laminated structures since 1919, and although their work is not often on such a large scale as that of the American fabricators it is sometimes more adventurous in design. The architect of the Army Mess Hall at Ulriksdal has exploited one of the essential characteristics of lamination in making the columns of his building continuous with beams of different depth. (Fig. 5.)

Sweden also produces an entirely different technique of lamination, generally called 'HB' construction. Here the web members consist of two layers of 1 in. boards, placed diagonally and at right angles to one another. The chords are laminated in the usual way and nailed to the webs. HB construction is cheap, efficient, and suitable for very large spans, but its characteristic appearance may not always be acceptable for interior design.

Denmark, Norway and Switzerland are also taking part in the development of lamination. V. Jacobsen's school at Copenhagen makes bold use of laminated frames which are fabricated on the Töreboda system. Erection of these prefabricated frames in reinforced concrete would have been a major problem, but in timber no difficulty was encountered. (Fig. 6.)

Comparison of structural forms in timber and other materials. It is worth making a comparison between the structural forms developed from modern timber techniques and those of other materials. In general there are some striking resemblances. (Figs. 7, 8 and 9.) The parabolic form has been exploited in reinforced concrete as in timber, as may be seen in the Northampton public baths and the church at Minneapolis. Similarly, two factory buildings, both in America, have flat curved roofs supported by free-standing columns, one roof being in shell concrete, the other of laminated ribs and boarding. The portal frame, familiar in precast concrete construction, may be compared with its counterpart in timber, while the framing of the Consolidated Aircraft factory in Arizona is so like normal steel construction in appearance that only the rectangular cross-section of the members confirms that it is built of timber. (Fig. 10.) Even in north light roof construction, where shell concrete has recently been used to excellent advantage, a remarkably similar system has been devised in Switzerland based on the same structural conception.

CONCLUSION. To sum up, we have seen that the means are now available both for making the best use of small quantities of timber and for interesting architectural applications, when sufficient material is available. The procedure of designing a timber structure on engineering principles is probably as complex, but not more so than a corresponding steel or reinforced concrete structure. For the simpler problem there is much to be gained by the practising architect if his staff is in a position to do the necessary calculations, and it is to be hoped that comprehensive handbooks will eventually be published which will perform the same function as the current steel handbooks. For more complex designs there will be an increasing demand for specialists in the use of timber as an engineering material. We may, therefore, expect the gradual emergence of the timber engineer, as we already have steel and reinforced concrete engineers. Nevertheless, the new

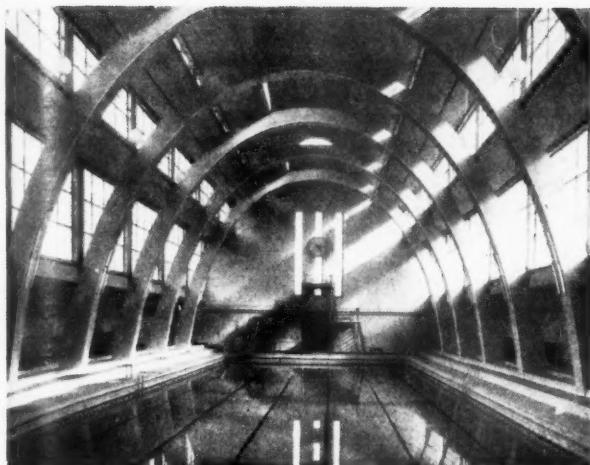


Fig. 7a: Northampton public baths, with reinforced concrete arches.
Architects: J. Prestwich and Sons

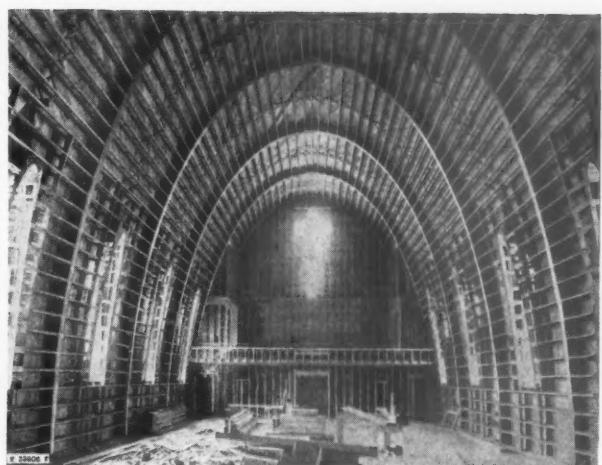


Fig. 7b: Church at Minneapolis, U.S.A. Laminated timber arches

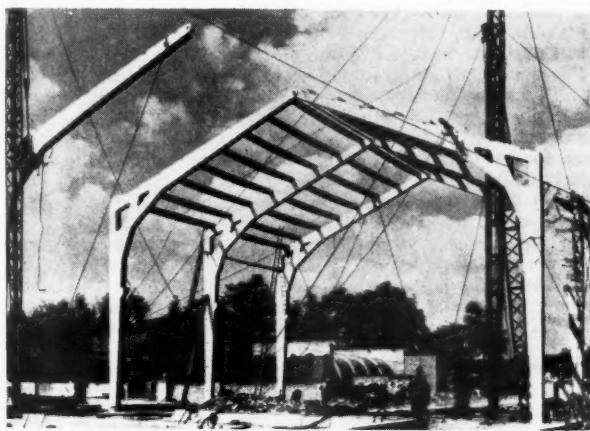


Fig. 8a: Glover system, three-pinned precast concrete frames



Fig. 8b: U.S. Army chapel, Bend, Oregon. Three-pinned laminated timber frames

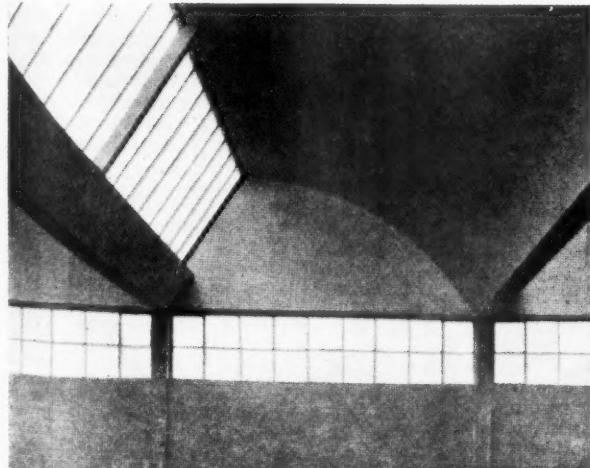


Fig. 9a: Clothing factory, Congleton, Cheshire. Shell concrete north-light construction. Architect: Rudolf Frankau



Fig. 9b: Factory in Zurich. Laminated timber north-light construction.
Architect: Dr. E. Staudacher

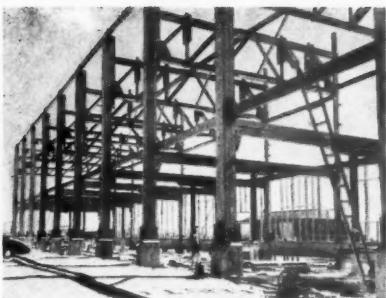


Fig. 10: Factory for Consolidated Aircraft Corporation, Tucson, Arizona. Timber frames with laminated columns and main beams

developments in timber technique are first and foremost the concern of the architect because he will eventually decide how far they can contribute to the design of buildings in the future.

DISCUSSION

Mr. Hartland Thomas [F]: It is particularly agreeable to the Architectural Science Board to have another lecture on timber engineering, because the previous lecture that one remembers so well was given by Mr. Reece about six years ago and the lecture today is a very worthy successor to that one; it brings us up to date in many ways. My own feeling about timber is that it is the material and that there is nothing else to touch it. Whoever heard of anybody stroking a piece of rolled steel lovingly! Timber has now been brought up to date and we can use it with accuracy and—what is so important in modern days—with economy; we can make structures of timber that look refined and which are not just scantlings according to the bye-laws! But faced with a structural problem how do we decide? We find that timber can be made into arches, framed trusses, shell barrels and all the things we might want to do, but how do we decide? I suppose we decide very largely on cost, so my first request to any future speakers is to give us some indication of the comparative cost at the present time.

Another thing I want to ask for is more data about hard wood.

Mr. G. B. Crow: The essential difference between the connector type of structure and the laminated type is that the connector structure uses techniques which are not strange in manufacture to the ordinary tradesman. They are proper techniques for site work, requiring only limited equipment, and the ordinary intelligent carpenter, capable of working accurately, can very quickly turn out first-class work.

When you come to the laminated structure, it is primarily a factory technique. There are factories in this country which are perfectly capable of carrying out this work if the demand were stimulated, but at the present time at least there must be very few places where work could be carried out satisfactorily. It is not a technique which is of common knowledge to certain tradesmen.

Mr. Walters referred briefly to stress grading. There are many practical difficulties in the way of buying and selling timber of stress grade, since for one thing there is the possibility of implied warranty. One can contract out of implied warranty, but there is the question of failure in use and that is one of the restraining influences. Timber that might be sold today, properly stress graded according to the rules, might be converted on the site or in the factory to another dimension, and that alone would be sufficient to destroy the grading already carried out. Grading can only be carried out piece by piece. Once the piece is altered in size, you are liable to fault in the grading. Nevertheless, there is a progressive element in the trade which, given the demand, will try to satisfy it; but designers must recognize that these stress grading rules must continue to be observed on the site so that each component, when it is put into position, can be said to be of the proper grade at that time and has not been changed by conversion.

There is a sign of enlightenment in high quarters in the recent issue of the Economy Memorandum dealing with the use of timber in all building work. I expect most of you are familiar with this document, but perhaps you have not all seen the latest issue in which general blessing is given to the use of timber as an economical material for single storey buildings for roofing purposes, so far as you comply with the limiting quantities in relation to floor space. Using modern techniques it is possible to get remarkable economy in the use of material, and in comparison with the requirements of steel for a similar job, the saving is something of the order of 25 per cent in tonnage.

For a long time now we of the timber trade have been fighting hard against the Government's policy in these matters. We have been fighting to get increased timber imports which could be used to much greater advantage and relieve the consumption of steel which is required for export. We are not asking for any privileges; we are only asking for timber to be placed on the same level of equality of choice with steel, concrete and any other substitutes.

Mr. R. A. F. Riding [A]: Everyone present here tonight will appreciate, I am sure, that this has been a lecture not only on the use of timber, but, judging from the slides, on architectural form in a very pronounced degree.

With regard to compressional forms, it is as a result of the necessity for translating tensile forms into compressional form throughout the years that we have the beautiful flying buttress and the delightful forms which one meets in great works of art in the Middle Ages.

Mr. F. J. Samuely, A.M.I.C.E., M.I.Struct. E.: I do not think that it is particularly coincidental that concrete structures look very similar to timber structures. Actually primitive concrete stresses to about 800 lb. per sq. in., and so does primitive timber, therefore there is no reason why timber and concrete constructions should be different. In

actual fact, providing one can do something about monolithic character, they should be equal in all circumstances.

Secondly, I think that there are some good examples of shell construction in timber, and they go a little further than shell construction in concrete. Two examples I have in mind are 700 to 800 years old. The dome of Ely is a true case of shell construction, and I have another small church in mind, at Inglesham near Swindon. It has been there since 1150, and it has a cylindrical roof which could not stand up unless it was a shell construction.

I hope that there will never be anything like a timber engineer! There should not, in my opinion, be a concrete engineer for we are much too specialist as it is. There is no reason why any engineer or architect should not know about timber that which he knows about steel and concrete.

Mr. R. T. Walters (in reply): With regard to choice of material it largely depends of course on the licensing authority at the moment. We have known instances where steel has been refused and timber recommended for one job, and exactly the reverse for another job.

From the point of view of cost, I think it is true to say that for framed structures there is not very much to choose between timber and steel. Laminated construction is much more expensive, and can generally only be justified if the particular function of the building and the shape of component required is sufficient to outweigh the extra cost.

With regard to hard woods, the data on the structural use of hard woods are not so comprehensive as those on soft woods, but they are expanding. The decontrolled hard woods vary from timbers which are lighter than soft wood in weight to other timbers which are very heavy and dense. Some of them are quite suitable for structural purposes, but before using them I would advise you to investigate the supply position.

Plywood is a very useful structural material which has been quite adequately investigated. It is used in gusset plates but has not perhaps shown as much promise as might have been expected. The reason is that its behaviour in conjunction with timber connectors has not been thoroughly investigated, but it has been used successfully for the shear resisting webs in box girders and plate girders designed on the same principle as steel components.

REFERENCES

- 1 *Code of Functional Requirements of Buildings*, Chapter V—'Loading'. (B.S.I.)
- 2 *Grading Rules for Stress-graded Timber*. British Standard 940, Part 1. 1944.
- 3 *Grading Rules for Structural Timber*. British Standard 940, Part 2. 1942.
- 4 *Sizes of Stress-graded Softwood Timber*. British Standard 1175. 1944.
- 5 *Draft British Standard Code of Practice*, C.P. 112. The Structural Use of Timber in Buildings
- 6 *An Introduction to the Design of Timber Structures*, by Phillip O. Reece. (E. and F. N. Spon, Ltd.)
- 7 *National Design Specification for Stress-graded Lumber and its Fastenings*. 1944, revised 1948. (National Lumber Manufacturers' Association Washington.)

Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialized branches of research and will willingly answer inquiries.

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Telephone: Abbey 3333.

The Director, The Building Centre, 9 Conduit Street, W.1. Telephone: Mayfair 8641-46.

The Director, The Scottish Building Centre, 425-7 Sauchiehall Street, Glasgow, C.2.

Telephone: Douglas 0372.

Non-Ferrous Metals Research. The British Non-Ferrous Metals Research Association have been celebrating the rebuilding of their laboratories, in Euston Street, London, N.W.1, which were partly blitzed in 1940. At a recent Press view they displayed their new and rearranged apparatus and demonstrated the astonishingly wide field of their work. This ranges from alloys for gas turbine heat exchangers to vitreous enamelling of aluminium. One thinks merely of non-ferrous metals as copper, zinc, lead, tin and aluminium; a visit to the Association's laboratories will reveal not only that there are many other non-ferrous metals but that the alloys of them are as multitudinous as are their uses in industry. If to this is added the fact that knowledge is needed of the behaviour of these alloys under different forms of stress, of heat, of abrasion, of corrosion, etc., one begins to envisage dimly the enormous scope of the Association's work.

This work embraces the use of non-ferrous metals in building. A simple example (on view at the Press visit) is the investigation of pitting in copper water pipe. In some districts severe pitting occurs, amounting eventually to holing. Holes may not develop for three or four years, though the shortest recorded time is as brief as four months. The Association discovered the cause to be a thin carbonaceous film left in the pipe after manufacture. With most waters this film does not matter, but with a few of them an interaction between the carbon and some constituent of the water sets up erosion of the copper. It is not yet known what this constituent is, not that it matters, because the removal of the carbonaceous film by the manufacturer will cure the trouble. An oddity of the pitting action is that with horizontal hot water pipes it occurs only on the bottom half of the pipe, though with vertical hot and cold water pipes and horizontal cold water pipes it occurs all round the bore.

Established in 1930, the Association now has an annual income of £100,000 and a staff of 163. It is a typically British organization in being a research body established and operated by industry but recognized and approved by the Government through the Department of Scientific and Industrial Research.

1951 Design Review. At a recent Press conference the objects underlying the '1951

Stock List' were explained. The Council of Industrial Design are responsible for the selection of all the currently manufactured exhibits that will be displayed in the various sections of the 1951 Exhibition, and for some time past have been collecting a comprehensive illustrated index of the best current industrial design; this index they call the 1951 Stock List, which will form the basis for a display of some 20-30,000 photographs and samples of flat products such as wallpapers; this display will be called the 1951 Design Review and has been allotted a special portion of the exhibition grounds.

Mr. M. Hartland Thomas [F], Chief Industrial Officer of the Council of Industrial Design, is responsible for assembling the Stock List, and at the conference he answered many questions from representatives of the Press, who showed great interest in the project. There was on view a small selection of the 8,000 or so photographs already received, and it is understood that architects who are interested may view the Stock List at the offices of the Council of Industrial Design, at 9 Buckingham Gate, London, S.W.1, as they may find it helpful in the selection of equipment and furnishings for their buildings, and Mr. Hartland Thomas will be grateful if visiting architects will let him have any criticisms they may wish to make on the Stock List.

The Council of Industrial Design have published a booklet, 'Notes for Industry on the 1951 Exhibition', giving information about the Exhibition; copies may be had from the Council.

Inflation. Messrs. Wiggins-Sankey, Ltd. are strongly in favour of inflation, not as a matter of national economics but as a means of moulding holes or conduit in concrete. This is done by an inflatable tube, which they call 'ductube', consisting of an inner rubber tube covered with a fabric braided diagonally, the fibres laid diagonally in one direction being stressed more than those in the other. The outer covering is rubber. The tubes are normally 60 ft. long, stopped at one end and fitted with an ordinary Schrader car tyre valve at the other. The method of use is to inflate the tube to some 50-70 lb. pressure; when the diameter is thus increased the tube contracts lengthways by about 15 per cent. It is then laid on the concrete where the hole or conduit is required to be and the rest of the concrete is



Demonstration of 'ductube' laid in an angle of concrete

poured on top of the tube. When the concrete is sufficiently set the air in the tube is released, the tube contracts in diameter and regains its original length, twisting slightly as it does so, because of the different stressing of the braided fibres. This action frees it from adhesion to the concrete and allows the tube to be withdrawn, leaving a clean hole. Services such as electric cables can be pushed through the hole, or pulled through if they have been wired to the end of the tube.

The tubes can be had in inflated diameters of 1, 1½, 2 and 3 in. and larger holes can be made by tying several tubes together. A special connector can be used when lengths of over 60 ft. are required in one operation.

The idea comes from America, but over here the sole distributors are Messrs. Wiggins-Sankey, Ltd. of Lysia Street, Fulham, London, S.W.6.

Building Research. The Building Research Board have published their 1948 Report on Building Research, addressed to the Lords of the Committee of the Privy Council for Scientific and Industrial Research. The report is followed by that of the Director of the Building Research Station. Space will not allow detailed reference to the many interesting subjects dealt with in the report and grouped under the headings materials, building construction, design and performance of structures, soil mechanics, efficiency of buildings, fire resistance research, and colonial housing, but it may be noted that the experimental lighting programme made good progress, especially with regard to glare. The notes on fire grading of buildings, and fire resistance research, bring out points of importance, relating—amongst others—to prestressed concrete flooring systems proposed for housing.

Commonwealth of Australia Experimental Building Station. In their Special Report No. 4, 'The theory and method of construction of thermal models of buildings', the Station describe results obtained by the use of models when investigating the thermal behaviour of buildings. At first, full-size prototype houses were built, but it was felt that if models could provide a reliable guide to the thermal behaviour of full-size buildings, then rapid examinations of thermal conditions could be made at a fraction of the cost and time that otherwise would be involved. The Report points out that by the use of models, simultaneous comparison of several types of construction can be made, built to the same plan and orientation, under identical conditions of climate and ventilation. As the materials used were similar to ours, such as brick,

timber-frame, concrete, and so on, the information given in the Report should be of value in our researches into the same question in this country.

Zinc in Building. The architectural student who is a little uncertain about constructional details may be excused; the experienced architect in the same plight excuses himself, because he really knows it but the little points, overlaid as they are by the bigger problems of his practice, escape his memory for a moment. The Information Sheets of the Zinc Development Association are a useful furnisher of rusty memories and a source of instruction to the temporarily ignorant, and sheets 1 to 6 have now been collected from the first six issues of the Zinc Bulletin and reprinted under one cover; they give useful information, illustrated by very clear diagrams, about the essential details of roof coverings and rain-water collection where zinc is used. Copies of these Z.D.A. Information Sheets 1-6 can be obtained from the Association, Lincoln House, Turl Street, Oxford.

The Lambda system of reinforced concrete construction. One of the advantages of reinforced concrete when cast in-situ is that it can provide structural continuity without connectors or site welding; on the other hand, it needs much formwork with attendant scaffolding or strutting. Then there are the important questions of correct placing of the reinforcing rods and the quality and compacting of the concrete. Admittedly these are matters of supervision, but not even a clerk of works is always everywhere at the same time, therefore any system that reduces or does away with these disadvantages is worth studying.

Messrs. R. E. Eagan, Ltd. have a proprietary system, known as the Lambda system of construction, which to all intents and purposes provides a rigid reinforced concrete structure without introducing the difficulties normally associated with in-situ work; this has been done by abandoning the idea of placing the joints in the usual conventional positions; instead, they are arranged to occur at the points of contraflexure or at the zones of least bending moment. Messrs. Eagan claim that, in

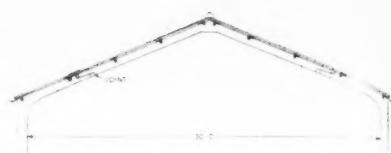
principle, their system is one by which a rigid framed structure can be broken up into appropriate units suitable for controlled prefabrication; they also claim that by this method a prefabricated reinforced concrete rigid framed building can be erected equal to the normal poured in-situ construction.

The system is not one by which ready-made units can be selected from stock; on the contrary, each project is considered on its own merits as an engineering problem, that the requirements of the architect may be fulfilled.

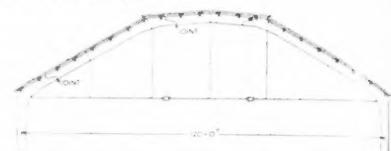
In essence the system consists of posts with their tops cantilevered out to form arms with scarfed ends at a pre-calculated position; similarly scarfed in-filling beam members are placed on these arms; the other ends of the beams may rest either on a wall, on the opposite posts, or on the next intermediate members, according to the design. The scarfed joints are connected by bolts designed to take the moments that may occur at their centre lines. Thus a variety of shapes can be obtained, some conventional, others not; and in the case of wide spans it is possible to design a ceiling outline closely approaching a curve. The accompanying drawings show typical constructions for a 30 ft. span and a 120 ft. span; these drawings are diagrammatic and are not to scale, as they are meant only to indicate what can be done and where the joints are likely to occur.

Floors can be constructed of prefabricated L-shaped concrete units filled in with concrete; the roof covering is more or less on the usual lines, with concrete purlins to which sheeting can be attached. Concrete rain-water gutters can be designed as constructional members, replacing the purlins which would otherwise be required in their stead. They can also serve as walk-ways for cleaning purposes.

All the units needed for a building can be cast either in a workshop or on the site; in both cases the concrete is vibrated. An advantage of casting on the site is that in a multi-storey building the units for the floor above can be made on the floor below and hoisting is thereby minimized. Normally the reinforcement for on-site work is delivered framed up ready for placing, and



For a 30 ft. span



The Lambda system. Tie rods would not be required where abutment is provided by buildings



The Lambda system. Diagrams of typical shapes. (Not to scale)

since the concrete is vibrated the moulds can be released comparatively quickly.

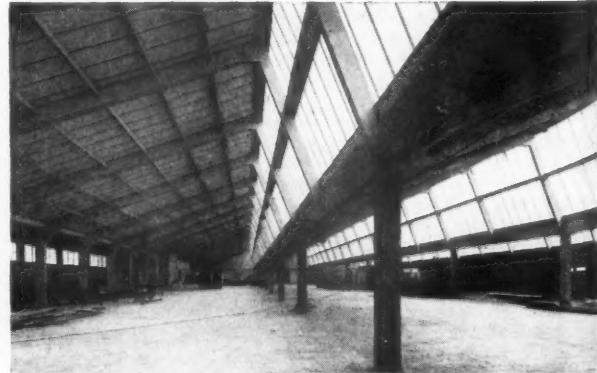
Messrs. Eagan make the following points; that the saving in steel, compared with a structural steelwork design, is normally 75 per cent; that maintenance is practically eliminated; that a minimum amount of timber is needed for moulds; that scaffolding is not required; and that there is a saving in the time taken in construction.

The reproductions of photographs illustrating this article show the units of a wide-span building being placed in position, and the interior of a building exemplifying one of the several shapes the system can provide. It will be noted from this interior view that the roof constructional members on the left span in one piece from the column arms to the main beam running down the building.

Inquiries should be addressed to Messrs. R. E. Eagan, Ltd. of 247-9 Vauxhall Bridge Road, London, S.W.1.



The Lambda system. Hangar at Bretigny, France



The Lambda system. Factory in Kent. Architect, J. Emberton [F]

Correspondence

'AN INTRODUCTION TO TUDOR ARCHITECTURE'

Sir,—May I refer briefly to some points raised by Mr. Summerson in his handsome review of my little book on *Tudor Architecture*.

The drawing in the British Museum (Cotton, Aug. 1 1.4) is probably the design for a section of Henry VIII's gallery in Whitehall Palace, later famous as the Stone Gallery. (Aug. 1 1.4) may be the 'upright' for which (Aug. 1 Suppl. 17) is the 'platt': the latter shows a corresponding range of 15 openings on one side, marked 'thys is all wyndows', while there is a note: 'The length of the galery xx vij xiiij foote (134') next the preve galery' (i.e. the Privy Gallery). Details of erection of what may be this same gallery are contained in some of the leaves of Royal Account Books discovered in Oxford bindings (Bodleian MS. Engl. hist. b.192). Six loads of elm timber were bought for 'the making of crooks for the foresaid open gallerie in the privye gardein'; oak timber was 'spent in and upon the rouff of the same gallerie'; Robert Burrell of London, painter, received £10 14s. 6d. 'for the paynting and gilding of parte (of) th'inside of the long open gallerie within the privye garden with a frete of and flowres of divers collours, with the kings armes and the quenes crowned, my lord princis badge, cognisauncis and many small cognisauncies and tables of antique work, wrought with fyne gold and byce fyne sinoperlack smalt and vedeter, mascot varmalon and other fyne collours in oyle primed cont. xlvi yards di. square at iiiii.s. iiiii.d. the yard so done'; Cornelius Simondson provided ironwork, and there are lists of joiners and labourers 'occupied as in framing and setting up of the beforesaid pillars and foyles of the said gallerie.'

Timber galleries supported by an open pentice or cloister on ground level do appear in one of van den Wyngaerde's drawings of Richmond Palace in 1562, an enlarged section from which is reproduced in my *Henry Yevele*, Fig. 25. But the scheme is of much earlier origin and goes back to similar timber works at Eltham Palace and Hertford Castle (see A. W. Clapham and W. H. Godfrey: *Some Famous Buildings and their Story*, Figs. 21, 59), and probably to stone originals such as the two-storied cloister (1332) of Old St. Pauls and the corridors of the Old Palace of Westminster.

Similarly, there is probably a much earlier derivation for the E-plan of Barrington Court than the accidental result of Henry VIII's additions to Hampton Court; the elements go back to the ancient hall-house with end wings. What was new was the craving for symmetry and architectural effect that also produced the internal front of Sutton Place and the street front of Christ Church, Oxford, both earlier than 1531. On a point of detail, it

may be worth adding that the triple bay-window with pointed centre unit can be carried back beyond Henry VII's Chapel to the rather earlier tower (1498-1500) built by the same King in Windsor Castle.

Yours faithfully,
JOHN H. HARVEY

THOUGHTS ON THE SOANE AWARD

Sir,—A church today is a difficult subject and one wonders whether it is suitable for students. No doubt a certain fantasy is permitted in the Soane, but when a talented design powerfully illustrates and sums up certain style weaknesses a protest is necessary.

First, thin shell-like concrete structure relying on curvature for stiffness is now widely advertised. It is suitable for some purposes but not for all. It makes thoroughly risky coverings for large auditorium buildings owing to sound focusing. Quite a small camber on a ceiling can cause a noticeable flutter echo and a segmental ceiling as here shown over a normal church floor is associated with a large number of avoidable acoustic complaints. The fact that churches, school halls, canteen halls, etc., can not have carpets and upholstered seats means that ceiling and ceiling treatment are critical.

Second, it happens that church heating is one of the little but very important problems ignored by all but a few technical people and technical firms. The large glass areas now affected by our modernists, bad enough in schools, hospitals, houses, are criminal in churches, where it is difficult enough nowadays to get adequate heating with normal traditional wall-to-window areas. The truth is you can't, by increasing glass areas, provide more light than our Gulf Stream climate provides, but can easily lose what little heat our fuel ration allows.

Third, durability and the question of maintenance after a period. No doubt many modernist buildings come clearly into a short term category. They are conceived as cardboard models, proceed to the Exhibition Hall, and stand at last greatly out of their element in the open air. No doubt in the new schools the rationale admits of an agreeable short-lived pavilion pitched in a garden; but churches, and several other types, come into a category where durability must be considered. To leave a church a serious liability to a parish is wrong. What will you look like when for 50 years the rain has been channelling your straight, uninterrupted vertical joints, temperature variation moved your diaphragms, frost attacked your exposed skins unprotected by drips, wind rocked your unpinched structure?

The industrial basis tends to set out the scientific problem for architects in the wrong terms; they think a factory roof extends over the universe. Our climate, however, literally tears at exposed surfaces. It is important therefore to distinguish the short-term building from the long-term, and develop a rational style able to provide both. Maintenance can not be ignored.—Yours faithfully,

H. BAGENAL [4]

CONCERT HALLS

Sir,—Mr. Hope Baggenal in his lecture laid particular stress on the modern requirement of clarity in Concert Halls, and that to achieve this the sacrifice of a fullness of tone would be unavoidable.

Over the years pitch has tended to heighten, and so, it seems, is tempo likely to follow suit. But it is acknowledged that both of these things are merely relative and the virility of a performance is not necessarily dependent on its tempo.

Someone in the musical world has got to call a halt to this craze for speed otherwise posterity will have a lasting regret that the architects of the present generation so far pandered to it that their concert halls are tonally poverty stricken.—Yours faithfully,

R. P. GRAY [4]

A copy of Mr. Gray's letter has been sent to Mr. Hope Baggenal, who replies:

Mr. R. P. Gray seeks to compare a tendency towards rapid tempo with the acknowledged gradual raising of pitch during the last centuries. I do not see that such an analogy can be made. As soon as violin playing and harpsichord playing became accomplished there was a tendency to go very fast because it is exhilarating, and because the ear under certain conditions can follow very rapid note sequences. But the human voice, though it can go fast, can not equal violins and harpsichord and piano. Breathing sets a limit. Nevertheless a competition was set up and we have in the 18th century a period when solo and ensemble singing in opera became ever more rapid. The great *castrati* could not only go up and down the musical scale from soprano to bass but could attain the speeds that we know so well in Mozart's operas. And Sullivan was greatly influenced by Mozarrian patter in developing 'Gilbert and Sullivan'. Now I have frequently pointed out that the extreme virtuoso speeds of Mozart were heard by audiences because of the remarkable acoustic properties of the 18th century Baroque theatre in which diffusion and mixed absorbents eliminated echo and cut down reverberation in large theatre buildings. Therefore good opera house conditions should be understood by architects if they want to carry on and not injure repertory music. It is well to recall that the Prinz Regent theatre at Munich gave a longish reverberation admirable for Wagner at slow speeds with full choral tone, but quite exasperating for general repertory purposes. When Sir Thomas Beecham takes the overture to *Figaro* like a streak of lightning glancing through the chambers of the brain it is as though the genius of the violin is challenging the genius of the voice. Our business as architects is to see that our miraculous children have a good home and that their playings shall still be heard. But sometimes we have to point out that it is a mistake to try to do too much in the same home, and choral tone derived from the church needs a different set of conditions. Modern tendencies seem to be in direction of repertory music theatre on one hand and on the other the large hall giving modified church conditions. The tempo will be different in each.—H. BAGENAL [4]

Practice Notes

Edited by Charles Woodward [A]

MINISTRY OF TOWN AND COUNTRY PLANNING. The Minister has made an Order under the New Towns Act, 1946, which came into force on 1 March 1950. The effect of the Order is that Development Corporations having submitted their planning proposals to the Minister, and he having consulted the local planning authority and approved the proposals, any development carried out either by the corporation themselves or by a person to whom they have disposed of the land will be classified as 'permitted development' and any second reference to the local planning authority will no longer be necessary. (The Town and Country Planning (New Towns Special Development) Order, 1950, S.I. No. 152, obtainable at H.M. Stationery Office, price 1d.)

SITING OF HOUSES IN COUNTRY DISTRICTS. The Minister of Town and Country Planning has issued Notes on the Siting of Houses in Country Districts, obtainable at H.M. Stationery Office, price 3d. net.

The Minister, whilst still believing that most new housing should be sited in or near to existing villages or hamlets, feels that the claims of people who really desire to live on their own away from other people should be recognized wherever it seems to the Authority that this can be done without harm to the interests of the community at large. For this reason Authorities should not invariably refuse applications to build in rural areas as this is too strict on interpretation of the Memorandum to Circular 5 which dealt with rural areas. The effect on the appearance of the countryside depends on the siting and design of the particular dwelling, and the fact that the countryside is fine would not in the Minister's view, justify the refusal of permission if the proposed building would not appear an intrusion on the landscape. This does not necessarily mean that it should be inconspicuous; isolated houses are often better sited unobtrusively, but it is a commonplace that a fine house may, on occasion, enhance the landscape by being conspicuous. Where, as may often happen, the successful siting of an isolated house depends on good design and a choice of materials which in colour and texture will blend with the surrounding landscape, a standard of appearance may reasonably be required which might seem excessive in a town. Good houses, well sited, should be looked upon as a permanent addition to the wealth of the countryside.

Where isolated houses are concerned it is a choice between refusing all applications and accepting a limited number of houses

on carefully chosen sites. That the Minister is in favour of the second alternative does not mean that he is prepared to allow the kind of 'sporadic development' which has so disfigured the countryside in the past. To permit one application in a particular spot places no obligation on the Authority to give further permission on sites where they consider any more development undesirable. On the contrary, they should hold themselves free at all times to decide applications on their merits, and when they have allowed a house or group of houses to be built they should not be deterred, merely because they may be charged with inconsistency, from refusing further applications. The risk of such a charge will be greatly lessened if the reasons for the refusal are explained.

Further, what is right in one part of the country may be wrong in another. Particular care, for instance, is necessary in dealing with applications to build isolated houses in a green belt or in open country on the fringe of a city or town. (*Note*.—The Notes deal also with Extension of Villages, Cottages for Farm Workers, and Smallholdings.)

CENTRAL LAND BOARD. Owners of war-damaged property subject to a 'value payment' from the War Damage Commission may have a further claim under section 59 of the Town and Country Planning Act, 1947. The Central Land Board have issued a leaflet, S.I.A. (War Damage) available at their Regional Offices explaining who is affected. Claims have to be lodged before 1 February 1951. The Board will make a contribution towards the fees of the claimant's professional adviser on the Scale set out in the leaflet, and in accordance with the conditions laid down in paragraph 14 of the leaflet. (Press Notice, 8 February 1950.)

The Board have considered the method of dealing with claims under Part 6 of the 1947 Planning Act (Section 58), which, if related to the whole of the area described in the claim, would probably be disqualified because under section 63 of the Act no payment can be made if the development value is (on average) £20 or less per acre, or one-tenth or less of the restricted value. The Board have decided that in cases of this description the claimant can be given an opportunity to reduce the area to which his claim relates if he so desires. Any claimant who desires to take advantage of this opportunity must do so on the understanding that if he does so the claim can not be revived in its original form. A claimant who thinks that his claim falls within this description should, in his own interest, inform the Board to this effect *without delay*. He will, in due course, receive from the Board a form, S.I.D., to complete. Where no such notice has been received the Board will themselves endeavour to draw the claimant's attention to this facility wherever it seems to them to apply, but they can not guarantee that they will be able to do so in every case. (Press Notice, 15 February 1950.)

MINISTRY OF HEALTH. Circular 20/50, dated 14 February 1950, refers to sites for Churches on Housing Estates, and the price at which local authorities, with the consent of the Minister, may sell land for the provision of places of worship and other ancillary buildings. It may be that some of the sites proposed to be sold are sites to which section 82 of the 1947 Planning Act will apply and that the sale will carry with it exemption from development charge in respect of development for which planning permission has been granted at the time of the sale.

The Central Land Board have decided that in determining the development charge for the erection of buildings for public worship and for other purposes of a religious body, the consent value (i.e. the value of the land with the benefit of planning permission for a particular purpose) will not be assessed at more than one-quarter of the housing value. If the building to be erected is to be used primarily for public worship the Board are prepared to consider a lower assessment. (See paragraphs 89 and 90 of Practice Notes (First Series) issued by the Board.) If local authorities were to fix the price of a site for a church at one-quarter of its housing value, the Minister would have no hesitation in approving this as a proper price for the purpose of section 79 (3) of the Housing Act, 1936. Local authorities have frequently sold land for the erection of churches at less than full market value, often indeed at nominal value, and the Department is aware that many are still following this practice.

Cases may occur in which one-quarter of the housing value would be less than the existing use value, and it is not suggested that in these cases there should be rigid adherence to one-quarter of the housing value, but that the price should be fixed in accordance with the general principle explained above, with any necessary adaptation to the particular local circumstances. Account may also properly be taken in any such agreements with religious bodies of the cost which has been incurred on the construction of roads on to which the site for the church, etc. has a frontage.

The arrangements outlined above do not apply to land referred to in section 83 of the 1947 Planning Act. It has been pointed out to the Churches Main Committee that it is for each local authority to decide whether sites on new housing estates will be made available for churches and, if so, on what terms and conditions they will do so with the Minister's consent under section 79 of the Housing Act, 1936. Circular 24/50, dated 10 February 1950, refers to a revised procedure for submission of housing schemes to the Ministry of Health. The Circular is accompanied by a Memorandum explaining the procedure, the Appendix to which contains four certificates to be signed by a qualified technical adviser. In completing certificate C. the qualified technical adviser certifies that the dwellings have been designed by a registered architect in conformity with the

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principles of the Ministry of Health's Housing Manual.

The Minister does not consider that present conditions justify any substantial increases over the general level of prices which has prevailed during the last year. He is therefore of opinion that when considering tenders for development work or the erection of dwellings, the local authority should act on the basis that no increase can be justified over the present level of prices except so far as it is accounted for by differences in the type or specification of the dwellings to be built or by special circumstances.

STANDARD METHOD OF MEASUREMENT. The Standing Joint Committee for the Standard Method of Measurement refer to the necessity for making sufficient allowance for wrot faces when preparing details of joinery. It was previously the custom to allow $\frac{1}{8}$ in. for each wrot face, but representations from the Trade resulted in this being increased to $\frac{1}{4}$ in. for each wrot face from the nominal sizes to allow for the necessary tolerance required by wood working machinery. It follows, therefore, that where architects prepare large-scale details allowing only $\frac{1}{8}$ in. in each wrot face, the surveyors have to measure uneconomical sizes if the joinery is to hold up the full size as detailed. The relevant clause of the Fourth Edition of the Standard Method of Measurement is 1 c of the Joiner Section.

INCREASE IN THE STANDARD RATES OF WAGES. In the February JOURNAL in Practice Notes under the above heading it was stated that the rates for apprentices were a prescribed proportion of the labourers' rate. This was an error. The rates for apprentices are a prescribed percentage of the *craft rate*.

LAW CASE. Smiley v. Townshend. In the December JOURNAL a report of this case was included at page 67; and judgment was given for the plaintiff.

The defendant appealed, and after hearing arguments of counsel on 7 February the Court of Appeal dismissed the appeal with costs. The case concerned the sum due in respect of dilapidations on the determination of a lease of premises.

In the case of *Maddox Properties Ltd. v. Davis*, heard by the Court of Appeal on 17 February, and reported in THE ESTATES GAZETTE for 25 February, the case of *Landau v. Marchbank* was referred to. The Court was of the opinion that evidence of lack of repair was not conclusive evidence of damage to the value of the reversion, but it might well be, and was generally held to be, *prima facie* evidence of that. In the Landau case the Judge had observed that 'the fact that repairs are necessary is not in itself even *prima facie* evidence of damage to the value of the reversion.' The Court of Appeal in the *Maddox Properties* case appeared to think that the words which had been quoted from

the Judge's judgment were inserted *per incuriam*.

The Landau case was referred to in Practice Notes, October JOURNAL, at page 541.

Constructional Research and the Architect

By Ronald H. Franks [A]

Teachers from several recognized schools of architecture attended on 16 and 17 February a two-day course arranged by the Board of Architectural Education at the Building Research Station and Field Test Unit of the Ministry of Works. Subjects of special interest to architects were carefully selected and presented in an attractive manner by lectures, slides, films, practical demonstrations and tours. The organizers are to be congratulated on their restraint in preventing the visitors from that mental and physical exhaustion so generally associated with visits of this kind.

The Building Research Station at Garston presented the effects of exposure on building materials, developments in steel construction and soil mechanics. The Field Test Unit at the Old Thatched Barn near Barnet, in its operational research role, presented prestressed concrete and mechanization for small building works.

At Garston the behaviour of soil in foundations has been subject to much research. Clay soils particularly, with their great seasonal movement, have given rise to the important development of the short bored pile. This method of foundation is claimed to be more economic and much more satisfactory for two-storey houses on clay soils than the usual strip foundation. At the Barn experimental work in connection with prestressed concrete continues, and from these experiments it is likely that stock standardized sections for small or large undertakings will soon be a practical possibility.

After a visit to these centres a completely new light is shed on the many publications issued by the Ministry. The pamphlets have a much greater appeal. It is to be hoped that the Board of Architectural Education in addition to continuing this course as an annual event will extend the scope of such courses, as suggested by Mr. J. Brandon-Jones last year, to organizations dealing with the history of architecture, sculpture, painting, furniture and kindred subjects.



Book Reviews

How the Greeks Built Cities, by R. E. Wycherley. 8½ in. xxi+228 pp. +xvi pls. text illus. Macmillan. 1949. 16s.

This book sets out to describe the characteristics of the Greek city of ancient times and the placing within it of the chief elements and buildings. As such books should, it seeks to find relationships behind life and achievement rather than to establish new facts or hypotheses. In this instance the study is concerned with the growth of the typical Greek *polis* and its architectural quality.

In doing these things the author is able to point issues and show parallels that are of peculiar interest to modern thought. If tradition is of use, then its study will be renewed in every epoch, though each may have some new slant upon the past and apply the lessons differently and in new ways.

The early history of 'town planning' in Greece is cloaked in the misty garments of Homeric and Mycenean times, about which little is yet known. Professor Wycherley, however, makes it clear that the Greeks were respectful of ancient traditions and of the sanctity of sites, and that it seems to have led them to a certain flexibility of planning and an adaptability for the meeting of particular needs. The plan of the Athenian Acropolis is a classic lesson in such planning.

Examples of balanced informality are very numerous in Greece and it is, perhaps, a little strange that the author shows so much more predilection for the formal and the later 'grid-iron' developments which were adopted and made characteristic by *Magna Graecia* in the new cities of the west: a rigidity which was adopted from the greater and more ancient cities of the 'barbarian' of the Middle East and from Egypt.

It is, perhaps, asking too much completeness, within the confines of this book, to hint that there are omissions. Paestum is not mentioned; excavations on this site have been made between the world wars and some interesting light thrown upon the layout of Greek houses and other buildings. Though Acratas is mentioned, there is no note of the fairly recent, if somewhat perfunctory exploration which has been carried out from time to time, since about 1920. Argos was the subject of a good deal of recent attention from the British School at Athens and the work has been published; little but its chief buildings are mentioned in the present volume.

Professor Wycherley's book is particularly valuable for its descriptions of the uses and the general planning of the individual elements of the Greek town, its more important buildings, its official character. Here the author has assembled a goodly amount of knowledge into a small compass. To regret that the Professor is not more of an architect is, however, not to detract from this work but merely to excuse certain things he has written. To say,

for example, that 'the arrangement of the elements in a complex shrine followed no fixed principles. The monuments were scattered about . . . in an extremely varied and haphazard way' . . . is merely to force the question—was the Greek genius so insensitive?

There is a curious reference to the round Italian temples of Vesta (in the plural) that should receive attention in any new edition, together with a few slips in indexing and references.

The book will be a useful one for all who wish to extend their reading in the history of early times as well as those specialists who are concerned with town-planning and town planning examinations. The book is well produced, illustrated, annotated and fully indexed. S. ROWLAND PIERCE [F]

The Work of the Sanitary Engineer, etc., by L. B. Escritt and S. F. Rich. Based on the work by A. J. Martin (of same title). 9½ in. xix + 689 pp. text illus. Macdonald and Evans. 1949. £2 2s.

This recent book has been written to meet the needs of civil engineers, sanitary engineers, architects, surveyors and building and sanitary inspectors, as well as for students who include the subject in their course of studies.

In the introductory chapter the authors have some helpful if trenchant criticisms to offer on examinations which apply generally to examinations on technical subjects, and which could be noted with profit by all those responsible for the setting of questions.

Again, the hints given on clear specification writing as well as the suggested procedure in the supervision of work show the good sense and clarity of thought that these authors bring to their work. These qualities are particularly noticeable in the section on the legal side of sanitation, which is as easy to read as to understand despite the fact that it covers the whole range of essential legal knowledge bearing on the subject.

The chapter on the 'Sanitary Accommodation for Buildings' has a special value for architects in that it sets out in orderly sequence all relevant sections of the Acts and Regulations which apply both in towns and outside, and furthermore covers the requirements for special types of buildings.

Hot and cold water systems are dealt with in two chapters that are short, concise and to the point, and yet cover sufficient ground for anyone except a specialist in these matters.

Although Soil and Waste Systems are well explained, and the 'One Pipe' method, which received bye-law consent in 1934, has been critically analysed most ably, the authors have not seen fit to mention the recent research work done on the 'Single Pipe' system described in Post-War Building Studies No. 4. This has only a single pipe and, subject to the tested provisions of the layout and workmanship, dispenses with all ventilating pipes. Perhaps the fact that it has not as yet received

bye-law recognition has influenced the authors to omit it in their present edition.

One interesting comment made in respect of the 'One-Pipe' system is that, although sanitary engineers avoid using it together with the ordinary dual pipe method of plumbing in the same building, the authors rightly see no reason why both systems should not be used in one building in positions appropriate to each system. It is the fact that this book abounds with constructive criticisms and practical commonsense of this kind that places it well above the usual 'descriptive' type of text-book which adds nothing to what is already known.

In the chapter on 'The Drainage of Premises' the case for and against the use of intercepting traps to each building is well put, but there is one strong objection to their omission in large urban areas which has not been mentioned. The objection is that as buildings in towns are mostly of different heights and usually abut closely one upon the other, there could be a grave danger of nuisance from the noxious air coming from a ventilating pipe serving a low building, where the top end of this vent lay below the windows of an adjoining and higher building.

The book includes excellent chapters on water supply, filtration and treatment, on general sewerage design together with a well illustrated section on sewage treatment both for small and large installations, including details of pneumatic sewage ejectors. A most useful portion of this section deals with the treatment of noxious trade wastes, a question of great importance today for architects and others specializing in industrial design.

This new book can be strongly recommended to students and to those in practice as one of the most complete and up-to-date treatises on the subject so far published, and by its very scope and manner of exposition it should have in addition a special appeal for town planners.

THOMAS RITCHIE [F]

The Principles and Practice of Prestressed Concrete, by P. W. Abeles, D.Sc. (Vienna). 9½ in. xii + 109 pp. + inset leaflet. text illus. Crosby Lockwood. 1949. 15s. Dr. Abeles has explained very clearly the basic principles and features of prestressed concrete with accounts of the various systems and their application, together with the advantages it has over normal reinforced concrete. From the design point of view a clear basis of calculation is presented with numerous examples of the actual design of members with, where necessary, comparisons between the various methods of prestressing and shapes of section.

A general review of the research in prestressed concrete is given together with a list of the principle publications containing research data, and suggestions for further research work. From the Swiss testing station research publication on prestressed concrete the author gives some facts concerning the influence of high temperatures

on the strength of steel, and he deduces that for average conditions of fire prestressed concrete should be safe if suitable protection to the steel is given.

Although technically prestressed concrete has become firmly established because it increases the range of usefulness of normal concrete, principally at the expense of structural steel, the architect will need to convince his client that, apart from steel economy, the cost is competitive with other forms of structure. Dr. Abeles has attempted to do this in Chapter XI, although naturally costs are dependent on quantity and the production methods used. It is known, however, that in countries such as Sweden, Belgium and Switzerland, costs are competitive for the types of products manufactured, and this must be so in this country in order to sustain present interest, rather than to treat the material as a steel or timber economizer only. Any attempt rigidly to control the use of the material in this way, in spite of increases in cost over normal methods, destroys confidence in its future use for structures where it is advantageous to use it.

Some of the examples of floors, beams, and slab bridges shown, where precast members are used in combination with in situ concrete, are extremely interesting and should prove very economical owing to savings in transport, handling and shunting.

Dr. Abeles is to be congratulated on this work, as the subject matter is well chosen and presented with ample illustrations in the form of diagrams and photographs of works completed and in progress. A bibliography of the important publications is included, making this book a very valuable contribution to the subject.

L. W. ELLIOTT [A]

The Practical Application of Acoustic Principles, by D. J. W. Cullum. (Architectural and Building series.) 8½ in. 200 pp. text illus. Spon. 16s.

The use of construction techniques to give improved sound insulation is widespread in this country in comparison with others, but publications about them are few and far between, and they deal chiefly with the treatment of flats and houses. In these circumstances a good new book is always to be welcomed, and this one has the special merit that it deals with many kinds of problems other than those of flats and houses. It fills a gap, in fact. For instance there is an extensive discussion of noise reduction in machines and ventilation systems, and two complete chapters on the treatment of special forms of insulating doors and windows, in addition to the more usual material on walls and floors. Legal aspects and noise as a cause of tiredness also receive attention.

On the purely acoustical side there are chapters on cinemas, on small rooms and on the different kinds of absorbents available. The emphasis on cinemas is at first glance an odd feature of the book, but in the text a lack of balance with other building types is not very evident.

W. A. ALLEN [A]

South Wales Outline Plan for the South Wales and Monmouthshire Development Area, &c., by T. Alwyn Lloyd and Herbert Jackson (Ministry of Town and Country Planning.) ob. 9½ in. by 11½ in. 105 pp. + pls. + var. maps, some folded + 4 maps in pocket. H.M.S.O. 1949. £2 2s.

The recent announcement by the Ministry of Town and Country Planning concerning the proposal to establish a new town at Cwmbran has increased interest in the South Wales Outline Plan, recently published by H.M.S.O.

The Plan, prepared by Mr. Alwyn Lloyd and Mr. Herbert Jackson, covers only the development area of South Wales and Monmouthshire. Comprehensive as it is, the authors have contrived to make it as flexible as possible, realizing the uncertain conditions prevailing in the much maligned but fundamentally beautiful Welsh mining valleys and the even more uncertain prospects of their future.

In spite of the comparatively large populations of Cardiff, Swansea and Newport, the real character and the real problem of South Wales and Monmouthshire still lie in the coalfield. This has, of course, been very fully realized by those responsible for the Plan, who seek to provide increased social services for the many scattered mining communities and suggest means of doing so on a co-ordinated basis. Unfortunately, the South Wales miner is not particularly interested in town planning or even in the cleaning up of his particular neighbourhood. His entire outlook on life is governed by the prospects of the local colliery, and to most South Wales miners an improved present is still clouded by an insecure future.

One of the main features of the Plan is the development of a suggestion to form a new town in the present Mynydd-Islwyn Urban District. The new town would combine several straggling mining communities, and would provide sites for new industries in an effort to produce a better balanced and more stable economy. It would also provide for any overspill from nearby small towns and villages due to changes in economic conditions.

Appropriate reference is made to the great industries of South Wales apart from coal mining. Steel, chemicals, glass, oil and tinplate are among those discussed, but possibly the significance of the great steelworks now being erected at Margam Moors has not been sufficiently emphasized. In the erection of new factories and new works there appears a tendency to return to the days when the life of Wales was clustered near the sea coast, but it is difficult to foresee the extent to which this tendency will develop.

Full attention, too, has been given to the problems of afforestation and of agriculture. The danger to agricultural land is, indeed, very great since some of the finest farm land is within easy reach of large towns. It is significant too that the rich agricultural land enfolds many of the ancient churches and traditional villages of South Wales recommended for preser-

vation, such as those lying in the Vale of Glamorgan and the Plain of Gwent.

While waiting for the lessons of the Plan to take root and ultimately bear fruit, there is much that can be done to the ground. At comparatively little cost bodies such as the National Coal Board and large private concerns could do much in clearing away derelict buildings and useless débris that litter their properties. At the same time a little tidying of the workers' own backyards would not come amiss. The black spots are man-made.

The publication of the Plan has been made over two years after its presentation to the Minister. In the meantime the Coal Board has taken a prominent place in the economy of the area and, in the eyes of some critics, has dealt harshly with un-economic mines. Other Boards have been formed, more may be on the way, and it is useless to pretend that the future of the Plan will not be very greatly influenced by those bodies. The authors had hoped that nationalization of coal would allow fruitful co-operation with the Board's departments and services, for the common good, but that hope may become dim before signs of a wider outlook begin to appear.

South Wales and its people, above all South Wales and its possible future, are all too little understood by those not personally familiar with the area. More should be done to bring the fundamental principles of the Plan within reach of a greater number of people. May one plead for a less expensive, popular edition?

H. A. BOWEN [4]

Over the Drawing Board. An introduction to architectural draughtsmanship, by Robert Forman. Illus. by author and J. H. Sexton. 9½ in. vii + 110 pp. text illus. Cleaver-Hume Press. 1949. 10s. 6d.

The shortage of good books on architectural draughtsmanship is a standing grievance, and for this reason Mr. Forman's new book is welcome. It can not be claimed that *Over the Drawing Board* will make every reader happy, but its brevity and clarity will appeal to students, and some useful reference matter is included. J.C.P.

Old Kingdom Art in Ancient Egypt, by Cyril Aldred. 7½ in. viii + 40 pp. + pls. Tiranti. 1949. 6s.

Old Kingdom sculpture is not everyone's fancy, and hitherto the subject has invariably been treated as one mainly of archaeological interest. Mr. Aldred, in this small book, seeks to present the art of the third to the sixth dynasties from an aesthetic angle.

As a contribution to the literature of art appreciation this is a welcome departure; but it is to be feared it can have but a limited appeal, if only because there is not enough of this early sculpture easily accessible to make it of compelling interest. One feels, also, that the author—himself a specialist—has assumed a fuller knowledge of the archaeological background than the ordinary student of art is likely to possess.

True, he gives us an outline history of his period—over a thousand years compressed into two pages! But he should have treated us more as beginners who need to have things explained. If this could have been expanded and, together with the appreciative comments (as incorporated with the descriptions to the plates), combined with the initial thesis as one compact whole, it would have added greatly to the practical utility of this survey of an unfamiliar phase of early art. C.G.E.B.

A Civic Survey and Plan for the City and Royal Burgh of Edinburgh. Prepared for the Town Council by Sir Patrick Abercrombie and Derek Plumstead. 14 in. by 11 in. xvi + 115 pages + liv. pls. + 22 folding maps + 3 folding maps in pocket. text illus. Edin. & Lond.: Oliver and Boyd. £1 5s.

We have had, since the war, a spate of regional and town plans, but it is doubtful if any have been of greater interest to the architect than the Edinburgh Plan. Excellent though the architectural chapters were in the West Midlands and the Clyde Valley reports, with both of which Sir Patrick was connected, we see him at his best with Edinburgh.

Whilst it was interesting to hear the various discussions amongst architects in Edinburgh shortly after the plan was published, some for and some doubting, not one accused the authors of shirking the problem. How easy it would have been for them to have stated complacently there is no need for a plan for the castle and Princes Street area! If you view Princes Street from the southern slope of the Mound there appears the lack of a guiding hand to see that there was any attempt at a rhythmic sequence.

How did this conglomeration of buildings find its way on to the main street of Scotland? Originally this street was composed of three-storey domestic buildings of little architectural value. Adam was associated with Charlotte Square and Craig with George Street, but Princes Street was left to the mercy of anyone. Before the war it was a rare occasion when the street was free from alteration at some point or other. In this respect the authors feel that rebuilding is inevitable during the next 50 years or even less. If their assumption is correct, it will present the biggest and certainly the most spectacular problem of civic design in Great Britain.

This being so, one can not but express admiration at the pains they have taken to explore the whole subject of architectural treatment—uniformity, controlled sanity or anarchy. Their answer to the problem is 'an attempt at a rhythmic sequence . . . prepared strictly as a sketch design and subject to continual modification as individual proposals are submitted for re-building.' Let us hope the result will be successful.

The solution to the traffic problem, namely, a three-decker street, is ingenious. If it is ever constructed it is to be hoped an architect will be called upon to assist the engineer in the project.

Knowing Sir Patrick's qualifications are not limited to architecture and planning, it is by no means strange to find that he has given considerable thought to the requirements of Edinburgh as the Festival City. Two centres are suggested, both containing concert halls, theatres, cinemas, practice rooms and studios, for the creation of a centre for educational purposes. The sites chosen, both standing slightly off Princes Street, at their respective ends, offer fine opportunities for the art of Civic Design. It is to be hoped someone may be given the task of preparing a layout for the area, so that owners of land and developers will know how they stand.

The section dealing with the Royal Mile between the Castle and Holyrood is again an architectural problem of no mean magnitude. The authors quite rightly ask of those who say 'let us restore the character of the Royal Mile', 'Do you mean the character of today or of 200 years ago?' The fundamental problem is one of land use. Having agreed upon the division of the various uses, the architectural problem of the area around Holyrood Palace still needs solving.

Anyone who is familiar with the area west of Holyrood may well ask—are the surrounds of the Palace fit for a King? There is only one answer. The surrounds of a King's Palace—how often does a private architect or a planner have the opportunity to show his skill on such a subject? Is not this a suitable subject for an architectural competition? We can have competitions for weird and wonderful subjects for 1951: why not a truly regal subject for the very heart of Scotland?

In addition to these problems there are others of equal magnitude such as population trends, traffic, particularly rail, etc., which all receive careful attention. Whether or not the solutions are all practical has to be proved.

The plan is well illustrated with maps and photographs as well as some excellent esquisse studies, and the price is reasonable, obviously not the cost price.

Architects may consider Advisory Plans a waste of time and money, but even if you do not agree with their conclusions you are bound to congratulate the authors of this report on their boldness of conception. Let us hope we may, at least, see a certain amount executed.

MAURICE E. TAYLOR [A]

The Planning and Equipment of Public Houses, by Francis W. B. Yorke. 9 in. 210 pp. incl. pls. + folding pl. text illus. Architectural Press. 1949. £1 1s.

I was privileged some time ago to read Mr. Yorke's early manuscript when he was in the throes of collecting data for this book. I have had much pleasure in reading it again in its finished state. Mr. Yorke has succeeded in doing a difficult job well, and has given to architects and others interested in the public house a much-needed guide to all that belongs to planning and equipment. With infinite patience and thoroughness he has collected a mass of most useful information, technical and

otherwise, details of which have been till now most difficult to obtain. The chief merit of his book in my view is that it is a perfectly straightforward text-book, clearly and attractively presented. He has not been tempted to stray from the path of practical considerations into bye-ways leading to irrelevant flights of fancy. Mr. Clough Williams-Ellis in his full and admirable preface also makes this point with emphasis and gives due credit to all the excellent qualities to be found in the book as a whole. A word of praise, too, must go to the Architectural Press for the attractive way in which the text and illustrations have been assembled. One can find one's way about without difficulty. The plans and details are clear, well drawn, and link up easily with the letterpress. A long-felt want has been satisfied, and this work will without doubt prove to be the standard book of reference on the subject.

In conclusion, may I point a moral? An impression gained from studying the many plans shown in the text is that planning a pub is a complicated business. Detail seems excessive, and plan shapes would appear to be infinite in variety. Particular conditions and the type of site are more often than not responsible. As long, however, as the designer keeps simplicity as his goal, he should not go far wrong. Here the plans of the late Joseph Hill, several of which are reproduced, are worthy of very close study because they are good examples of simple, direct planning and of shapes which have grown out of the natural conditions of the site. The many types of plan and house illustrated may perhaps bewilder the reader, whether architect or layman; but once he has grasped the fundamental principles governing the evolution of the public house, the complications should disappear and he will then be able to think in terms of good planning combined with sensitive design. Everyone interested in the public house, particularly from the technical point of view, should get a copy of this excellent book.

E. B. MUSMAN [F]

(Reprinted by kind permission of the Editor of 'A Monthly Bulletin'.)

A Calendar of British Taste from 1600 to 1800, &c., chronologically arranged by E. F. Carritt. 8½ in. xiii + 476 pp. Routledge and Kegan Paul. [1948 or -49] £1 1s. The gleanings of a distinguished Oxford don from the books, plays, letters, advertisements and diaries of two fascinating centuries provide an absorbing anthology. Items are arranged for each year under such headings as Manners, Painting, Poetry, the Stage—and even Architecture is by no means forgotten! Those who believe that to obtain a living picture of a period, fashionable gossip is often as important as the solemn reflections of the professional critic, will thoroughly enjoy this book, which is equally suitable for casual 'dipping' or as a basis for a serious study in the development of taste. On the other hand, readers preferring to classify their literary and artistic history with convenient all-embracing labels may have a few salutary shocks.

J.C.P.

Architectural Drawing, Perspective and Rendering. A handbook, &c., by Cyril A. Farey and A. Trystan Edwards. 2nd ed. 9½ in. by 7½ in. viii + 96 pp. + lxviii pls. text illus. Batsford. 1949. £1 1s.

This survey of recent architectural draughtsmanship in theory and practice, first published in 1931, has been out of print for some years. Its reappearance in revised form, with some of the original illustrations replaced and a number added in colour, half-tone and line, will be very welcome to students.

Worcestershire, by Tudor Edwards. Drawings by C. S. Markbreiter. (Vision of England series.) 9 in. × 7 in. 112 pp. + pls. Map & text illus. Elek. 1949. 15s.

The title of the series suggests a more compelling effect than this particular volume achieves. Perhaps too much has been attempted in so small a space, for a book of this kind too easily becomes a catalogue of names and places, and seems neither an adequate guide to the enquiring traveller nor a satisfactory diversion to the stay-at-home. A hundred and ten pages devoted to one village, or even to one field, might more easily cause us to see a vision of Worcestershire, a vision such as Richard Jefferies knew how to create.

In the text there is mainly architecture, and hints that we are no longer capable of architecture. There are little bits of literary criticism and little bits of social criticism, little bits of history and little bits of legend. There are plenty of personalities, and we hop about from architects and craftsmen to painters and priests and prime ministers. This may be deliberate, the 'intimate and personal in style rather than formally descriptive' of the dust jacket: but there is little time for digestion.

The language is sometimes forced. Lots of churches are 'embattled', lots more buildings are 'maggie'. 'Diamond-backed Nazis' was confusing at first; but 'the diamond-backed, jack-booted species' explained it. 'A douce house', 'a swanky finicky house'; 'angel-pranked urns', 'a neat piece of banker's prinking', 'its banks pranked with tidy lawns', 'a sculptured full-quiver of youngsters' . . .

But possibly these are personal prejudices. For after reading this book, who would not want to see the houses of Bewdley or Pershore, or the astonishing and unexpected chapel of Witley Court? And who could not enjoy the poetry of the place names, for here is almost a vision of Worcestershire in itself.

Rock-with-Heightington, Lickey, and Cofton, Far Forest, Mamble, Stewponey Inn, Dormston, Himbleton, Grafton, Offenham, Huddington, Peopleton, Hadzor and Crutch. Sapey Pritchard, Hanley William, Tedstone Wafre, Hanley Child, Himley, Shell, Flyford Flavell, Ombersley, Abberley, Eckington, Quatt.

For the rest, there are some very good photographs (particularly the architectural ones), some attractive drawings, and a poorish map and index. Both the dust jacket and the binding are excellent.

IAN COLQUHOUN [A]

Spons' Architects' and Builders' Pocket Price Book. 75th ed. (1949-50). *Davis, Belford, and Everest*, eds. 6½ in. 519 pp. Spon. 1949. 15s.

This time-honoured and invaluable reference book was almost entirely rewritten for the last edition, so it is only logical that in the newest version the editors should have been content to improve a few details and correct some minor shortcomings of its predecessor. Prices and other information are mainly those current at November 1948, which is no doubt as up-to-date as the most exacting reader can expect under present publishing conditions.

Oxfordshire, by *Reginald Turnor*. Drawings by *Françoise Taylor*. (*Vision of England series*) 9 in. by 7 in. 120 pp. incl. pls. text illus.

This is much like the other volumes in the series, with chatty text, not too architectural, some rather spidery drawings, and Speed and small-scale Ordnance maps—the latter coarsened and deprived of interest by reproduction, the whole redeemed by a representative collection of good photographs. These are fairly divided between scene, church and house, and between the known and the unfamiliar. Oxford city reasonably occupies about a quarter of the illustrations, but less than

a tenth of the text. Altogether a good 'taster', and suitable for new visitors to the county.

H.V.M.R.

Elementary Reinforced Concrete Design for Students of Architecture and Building, by *W. Morgan*. 8½ in. viii + 303 pp. text diagrs. Arnold. 1949. 16s.

The requirements of architectural students were a first consideration with the author, but he has succeeded in writing more than a mere examination text-book. The practising architect who may have to design simple beams or slabs without a structural engineer at his elbow will also find it valuable.

Notes and Notices

NOTICES

The One Hundred and Twelfth Annual General Meeting, Tuesday 2 May 1950

The One Hundred and Twelfth Annual General Meeting will be held on Tuesday 2 May 1950 for the following purposes:

To read the minutes of the Sixth General Meeting held on 7 March 1950; formally to admit new members attending for the first time since their election.

To receive the Annual Report of the Council and Committees for the official year 1949-50. (Copies of the Annual Report will be sent to members in April.)

It will facilitate answers to questions if members will give the Secretary prior notice of any questions which they may wish to ask. Notices should be in the Secretary's hands not later than 22 April. This will not preclude the right of members to ask questions on the Annual Report without having given prior notice.

To nominate candidates (two members) for the office of Hon. Auditors for the ensuing year.

To receive the list of attendances at the Council during the Session.

(Light refreshments will be provided before the meeting).

Session 1949-50. Minutes V

At the Fifth General Meeting of the Session 1949-50, held on Tuesday 21 February 1950 at 6 p.m.

Mr. Michael Waterhouse, M.C., President, in the Chair.

The meeting was attended by about 380 members and guests.

The Minutes of the Fourth General Meeting held on Tuesday 7 February 1950 were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President:

AS FELLOWS:

W. A. Eden, T. R. Eltringham, H. K. Wakeford.

AS ASSOCIATES:

H. J. Barber, B. A. Barker, E. A. Barrie, A. C. Bird, J. H. Bramwell, E. M. Brett, J. L. Browne, R. H. E. Bull, J. B. Campbell, J. A. V. Clark, E. R. Corby, E. N. Cousens, N. V. A. Crick, F. C. Davies, L. D. Dor, G. J. Easton, P. F. Eatwell, J. C. Ellis, D. C. Eva, A. H. Fielding, D. A. Flett, R. A. J. Gazzard, I. D. Grant, B. W. Green, R. C. Hosford, Andrew Kelt, Miss C. N. Lacy, M. G. R. Lyell, R. V. Mayne, J. H. Milnes, H. G. Montgomerie,

R. O. Moss, J. D. Owen, M. R. Pearce, L. J. Perlston, C. E. Rae, Miss K. E. Rose, C. Ross, Miss S. A. Serne, W. A. E. Sewell, A. F. Shannon, Peter Silsby, M. J. Simpson, E. J. G. Skipper, Gerald Stanwell, J. R. H. Thurstan, G. R. Toogood, P. W. Verrall, A. H. Walker, C. A. St. J. Wilson, H. G. Woffenden.

AS LICENTIATES:

John Billam, John Kryton, F. W. Marston, A. C. B. Wincer.

Mr. Noel Rooke, having read a paper on *The Work of Lethaby, Webb and Morris*, a discussion ensued, and on the motion of Mr. Henry M. Fletcher, M.A. [F], seconded by Mr. John Brandon-Jones [A], a vote of thanks was passed to Mr. Noel Rooke by acclamation, and was briefly responded to.

The proceedings closed at 7.45 p.m.

Session 1949-50. Minutes VI

At the Sixth General Meeting of the Session 1949-50, held on Tuesday 7 March 1950 at 6 p.m.

Mr. Michael Waterhouse, M.C., President, in the Chair.

The meeting was attended by about 540 members and guests.

The Minutes of the Fifth General Meeting held on Tuesday 21 February 1950 were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President:

AS FELLOW:

H. H. Goldsmith.

AS ASSOCIATES:

K. G. Adams, K. C. Bourne, K. M. Carver, P. J. Coles, Frank Dunnett, R. J. Hey, P. E. Johnson, G. W. King, Miss Margaret Lawson, C. G. Looker, Harold Oldham, A. E. R. Purkis, R. J. Rabson, E. H. Sims, Mrs. J. M. Spence, W. G. Sprague, G. C. Taylor, G. E. Unwin, M. J. Ward-Willis, J. N. Way, G. B. Wells.

AS LICENTIATES:

A. F. Murray, C. D. Pople.

Mr. Hugh Casson, M.A. (Cantab) [F], having read a paper on '*The 1951 Exhibition—Planning the South Bank*', a discussion ensued, and on the motion of Professor Sir Patrick Abercrombie, M.A., F.S.A. [F], seconded by Mr. J. Murray Easton [F], a vote of thanks was passed to Mr. Hugh Casson by acclamation, and was briefly responded to.

The proceedings closed at 7.45 p.m.

British Architects' Conference, Bristol and Bath, 7-10 June 1950

All members and students of the R.I.B.A. and the Allied and Associated Societies are cordially invited to attend the Conference. Full particulars of the programme are enclosed with this issue of the JOURNAL.

Members of the R.I.B.A. and the Allied Societies who are officials of local authorities will be welcomed as delegates to the Conference.

It will greatly facilitate the arrangements if members who propose attending will fill up the fly-sheet attached to the programme and return it as early as possible to the Secretary, R.I.B.A., and in any case *not later than 13 May*.

It is expected that there will be a large attendance of members from all parts of the country, and they are advised to arrange their hotel accommodation at the earliest possible moment, to avoid the risk of disappointment.

The Executive Committee of the Conference have furnished a list of hotels in and around Bristol and Bath which is included in the Conference programme.

R.I.B.A. Reception 28 April 1950

There will be a Reception at the Institute on Friday 28 April 1950 from 8.15 p.m. to midnight. The President and Mrs. Waterhouse will receive the guests in the Henry Florence Hall from 8.15 to 9 p.m. and there will be dancing from 9 p.m. until midnight.

Tickets are 15s. each. In the first place members will be restricted to one guest each but they may give the names of further guests for whom tickets will be supplied should it prove that accommodation will be available. Application for tickets (with remittance) should be made as early as possible.

Payment should be made by crossed cheque or postal order.

R.I.B.A. Kalendar

The next issue of the Kalendar will be published in the autumn and members and students wishing to notify new addresses for publication should do so as soon as possible. The last date for receiving changes for inclusion in the new Kalendar will probably be at the end of May next, from those in the United Kingdom, and from overseas about a month later.

It will still be necessary to restrict members and Students to one address each.

War Damage Commission: Retention Money in respect of Group Rebuilding

The Practice Committee have recently been in communication with the War Damage Commission on the question of some modification of the Commission's normal rules for the release of retention money to meet certain cases where a considerable number of destroyed houses are being rebuilt as a group under one building contract, but owing to various factors

the completion of some of them is unduly protracted.

It is, of course, appreciated that initially the Contract is a matter between the claimant and the contractor, but the Practice Committee suggested that, in the case of the reinstatement of a large group of houses extending over a lengthy period, the Commission might arrange for part of the retention money to be released in respect of a completed proportion of the total number of houses involved.

In reply, the Commission expressed the view that it would be impracticable to attempt to prescribe any set rules on the subject, but they fully agreed that, in such instances of undue delay in the complete reinstatement of a large group, it would be reasonable to make some special provision.

The Commission accordingly propose to authorize each Regional Manager to settle *ad hoc* arrangements as he may agree with the architect concerned to be suitable in the circumstances of a particular case.

R.I.B.A. Diploma in Town Planning

Mr. Leslie V. Mitchell [4] and Mr. Robert G. H. Turnbull [4], having passed the qualifying Examination, have been awarded the R.I.B.A. Diploma in Town Planning.

Correspondence with the Institute

In order to facilitate speedier attention to correspondence, and to relieve the staff of a great deal of research, it is particularly requested that members and students will kindly state in all correspondence with the Institute the class of membership (F, A, L or Student) to which they belong.

BOARD OF ARCHITECTURAL EDUCATION

The Probationership of the R.I.B.A. and the General Certificate of Education

The Council of the R.I.B.A., on the recommendation of the Board of Architectural Education, have decided that the General Certificate of Education shall be added to the list of examinations accepted for the Probationership of the R.I.B.A., provided that it covers the following subjects: (1) English (Language), (2) Mathematics (Elementary), and either three of the following if all five subjects are taken at 'ordinary' level, or two of the following if at least one of the four subjects is taken at the 'advanced' level:

- (a) A Modern Language, other than English.
- (b) Physics.
- (c) Chemistry.
- (d) Physics with Chemistry.
- (e) Mechanics.
- (f) General Science.
- (g) History.
- (h) Geography.
- (i) Economics.
- (j) Mathematics (Advanced or 'Further' or 'Additional').
- (k) Latin.
- (l) Greek.
- (m) English Literature.
- (n) Art.

The applicant will be required to submit drawings in support of his application for the Probationership.

Final Examination, December 1949

The Final Examination was held in London, Birmingham, Leeds, Edinburgh, Manchester, Newcastle and Belfast from 30 November to 9 December 1949.

Of the 358 candidates examined, 175 passed as follows:

| | | | |
|--|----|----|----|
| Passed Whole Examination | .. | .. | 61 |
| Passed Whole Examination subject to approval of Thesis | .. | .. | 64 |
| Passed Part I only | .. | .. | 50 |

175

183 candidates were relegated.

The successful candidates are as follows:

Whole Examination

| | | |
|--------------------------|--------------------------------|----------------------|
| Abbott, Henry | *Jones, David H. | Noble, C. W. |
| Ames, G. G. S. | *Keen, F. J. | O'Gorman, J. A. |
| *Anderson, B. L. | Kerr, T. F. | Partridge, J. A. |
| *Andrews, B. G. | Kharkar, M. S. | Piatkowski, Lech |
| *Appleby, D. J. | Lambeth, D. F. | Preston, A. M. |
| *Armstrong, L. G. | *Law, John | Przyblyski, W. K. |
| Bailey, D. B. | Little, Arthur | Ratcliffe, C. B. |
| Bailey, J. D. | (Distinction in Thesis) | Rennison, P. T. |
| Baldwin, Kenneth | Longville, Henry | Richards, D. F. |
| (Distinction in Thesis) | McEwen, F. C. | Russell, P. S. |
| Ball, Alfred | McLean, H. W. | Elter, Ferdinand |
| Berger, B. S. D. | Macmanus, G. R. M. | Fidler, D. M. |
| *Bernhardt, D. V. | McMenan, W. M. R. | Gorska, Anna (Mrs.) |
| *Blampied, M. R. | Manning, D. G. | Hall, N. B. J. |
| *Blanchard, B. W. | (Distinction in Thesis) | Head, A. E. |
| *Boswell, E. S. | *Marflitt, J. W. | Head, R. L. |
| Brimicombe, M. A. (Mrs.) | Measday, C. M. | Hewaniwicki, Adam |
| *Buck, H. D. R. | *Middlebrook, D. J. | Hewitt, B. M. |
| Bull, J. E. | Miller, P. G. | Hill, D. B. |
| *Burrell, J. A. | (Distinction in Thesis) | Hogarth, D. J. |
| Carman, J. R. W. | *Mitchell, J. H. | Jakubowicz, J. W. |
| Chatton, E. G. | Moorcroft, R. L. | Katten, H. G. |
| Cheeseman, E. J. | *Morris, David | Knight, P. H. |
| Clarke, D. G. | *Mowbray, P. G. | Krasuski-Wczelik, K. |
| *Clarkson, Harry | *Murrell, H. C. | Leaker, D. R. |
| *Cummings, E. A. | *Nicoll, P. K. | Lech, J. M. |
| Cunnington, P. M. (Miss) | *Peck, M. H. | Zawilski, Karol |
| (Distinction in Thesis) | *Pegg, G. M. | |
| Dixon, N. J. | Poole, J. R. (Miss) | |
| Dodd, G. B. D. | (Distinction in Thesis) | |
| Doe, D. B. | Pool, R. E. | |
| *Dowell, N. C. | *Prodgers, C. H. | |
| *Duffy, P. D. | *Purkiss, D. N. | |
| *Englefield, G. S. | *Ramsay, J. M. | |
| *Falkus, D. T. F. | Reynolds, P. J. | |
| *Fleming, E. R. | *Rich, S. G. | |
| *Foster, John | *Robinson, Frank | |
| *Froud, M. C. | Rooker, L. D. | |
| *Furness, G. G. | *Rostron, Jerrold | |
| Gardner, Roy | Rowe, J. S. | |
| *Garrett, S. G. | Sawyer, R. L. | |
| *Gleaves, Kenneth | *Scadding, E. F. | |
| *Gooday, L. H. | *Scales, L. S. B. | |
| *Graham, J. K. | Sheldon, J. F. | |
| *Greenslade, K. J. I. | (Distinction in Thesis) | |
| *Gundry, P. B. H. | *Shirbon, W. A. | |
| Gutteridge, G. F. | *Smith, Peter C. | |
| (Distinction in Thesis) | *Smith, Stanley F. | |
| Hambly, Maya | Souter, A. E. | |
| (Miss) | Spittle, S. D. T. | |
| Hammond, G. G. W. | (Distinction in Thesis) | |
| *Hanna, M. E. | *Taylor, John (Cornwall) | |
| Harris, H. L. W. | *Taylor, John (Essex) | |
| *Harrison, R. E. G. | *Thorpe, D. B. | |
| *Hastilow, Noel | Todhunter, S. E. | |
| Heath, D. N. | (Miss) (Distinction in Thesis) | |
| Hestford, Arnold | Taylor, I. A. T. | |
| *Hewish, R. A. | Taylor, John (Avshalom) | |
| Hollins, P. B. | (Distinction in Thesis) | |
| (Distinction in Thesis) | *Tompson, John | |
| *Hothersall, G. L. | Howell, C. L. | |
| Insall, D. W. | (Distinction in Thesis) | |
| (Distinction in Thesis) | Humphrey, Ernest | |
| *Jones, Alan C. | Tough, J. McK (Miss) | |

Turner, Geoffrey

*Turner, R. E.

Walker, R. P.

*Watkins, Ronald

Watson, D. H. R.

*Watson, L. H.

* Subject to approval of Thesis.

Part I Only

| | |
|---------------------|--------------------------------|
| Astorga, T. D. W. | Noble, C. W. |
| Borowiecki, Zygmunt | O'Gorman, J. A. |
| Brewerton, R. L. | Partridge, J. A. |
| Brown, John G. | Piatkowski, Lech |
| Burn-Hill, A. S. | Preston, A. M. |
| Clarke, D. H. P. | Przyblyski, W. K. |
| Clayton, M. J. | Ratcliffe, C. B. |
| Cooper, Malcolm | Rennison, P. T. |
| Corne, Gerald | Richards, D. F. |
| Crane, G. E. | Russell, P. S. |
| Elter, Ferdinand | Shepherd, W. D. |
| Fidler, D. M. | Solomon, W. R. |
| Gorska, Anna (Mrs.) | Spencer, J. V. |
| Hall, N. B. J. | Starczewski, Henryk |
| Head, A. E. | Stokes, A. T. J. |
| Head, R. L. | Stott, D. T. |
| Hewanicki, Adam | Tomlinson, G. G. |
| Hewitt, B. M. | Walker, H. V. |
| Hill, D. B. | White, Janet P. (Miss) |
| Hogarth, D. J. | Whittenbury, June (Miss) |
| Jakubowicz, J. W. | Williams, E. J. J. |
| Katten, H. G. | Williamson, J. F. Young, L. M. |
| Knight, P. H. | Zawilski, Karol |

The Special Final Examination, December 1949

The Special Final Examination was held in London, Birmingham, Leeds, Manchester, Newcastle, Edinburgh and Belfast from 30 November to 9 December 1949.

Of the 349 candidates examined, 122 (21 in Part I only) (3 in Part 2 only) passed.

227 candidates were relegated.

The successful candidates are as follows:

Whole Examination

| | |
|---------------------|--------------------------|
| Allan, T. T. | Johnstone, W. P. |
| Ashton, H. G. | Josephides, A. P. |
| Bamber, D. H. | Judges, A. C. |
| Bannington, E. E. | Kerr, P. E. |
| Beesley, Sidney | Kerr-Lucarotti, Francis |
| Begbey, D. C. | Killeen, D. W. |
| Bicknell, A. J. | Kind, R. A. B. |
| Birch, F. L. | Kirby, G. A. |
| Bloor, Geoffrey | Knight, L. P. |
| Boak, J. L. | Laker, R. A. |
| Boilon, C. M. | Langston, A. H. |
| Brown, Thomas F. | Lawton, T. W. |
| Bruce, D. S. | Lee, N. W. |
| Bruce, J. G. | Leece, E. V. |
| Cavanagh, A. L. | Crockett, G. M. |
| Crockett, G. M. | Dancer, J. K. |
| Dancer, J. K. | Davies, G. I. |
| Day, A. C. | Donnan, A. H. |
| Dyer, A. J. | Day, A. C. |
| Fairbrother, Arthur | Dyson, M. H. |
| Farrow, H. C. | Fitzgerald, J. P. |
| Fenton, R. F. S. | Fraser, J. C. |
| Ford, J. A. | Gallagher, H. H. A. |
| Gallagher, H. H. A. | Grinshpon, Avshalom |
| Grinshpon, Avshalom | Guard, W. P. |
| Hemmings, L. G. | Hemmings, L. G. |
| Henley, J. A. | Pinion, J. T. |
| Henry, T. E. F. | Polkinghorne, R. W. J. |
| Howell, C. L. | Roberts, H. O. |
| Humphrey, Ernest | Ryde, G. W. A. F. |
| Hunt, S. C. | Robertson, P. McD. |
| James, J. L. T. | Wills, Barbara A. (Miss) |

| | |
|-------------------|---------------------|
| Sharp, B. C. | Swarbrick, M. V. D. |
| Sharp, J. J. | Taylor, G. R. |
| Skingsley, E. S. | Thomas, R. A. |
| Slater, R. E. M. | Topping, W. D. |
| Smith, John E. | Tugwell, P. D. |
| Smithurst, A. H. | Tunstall, J. B. |
| Snowdon, William | Uren, Victor |
| Sparrow, K. G. | Wainwright, Allan |
| Stacey, S. L. G. | Waite, Kenneth |
| Steen, Kenneth | Walker, James |
| Steptoe, C. C. | Wardley, J. A. |
| Stevens, Reginald | Watts, D. W. |
| Stoneham, D. W. | Wilkie, C. C. |
| Stones, H. B. | Williams, C. L. |
| Suhar, B. T. K. | Woodward, Clifford |

Part I Only

| | |
|---------------------|---------------------|
| Arnold, D. J. | Hazelwood, V. H. |
| Bor, Walter | Hope, J. A. K. |
| Boyd, W. T. | Howlett, J. C. |
| Brown, David T. | Kirk, A. G. |
| Bull, S. J. | Parker, J. E. |
| Carmichael, John | Rogers, L. G. |
| Chamberlain, George | Rytarowski, Tadeusz |
| De Lara, L. G. C. | Snowden, J. H. |
| Eames, E. H. | Southgate, S. E. |
| Economou, S. N. | Toner, Charles |

Part II Only

| | |
|---------------|---------------|
| Henry, J. V. | Wallis, A. E. |
| Pettit, C. F. | |

The following candidates have also passed the Special Final Examination:

| | |
|-----------------|------------------|
| Collins, S. F. | Pert, K. G. |
| Lewis, T. W. G. | Soltynski, R. M. |

The Examination in Professional Practice for Students of Schools of Architecture Recognized for Exemption from the R.I.B.A. Final Examination

The Examination was held in London, Manchester, Newcastle and Edinburgh on 6 and 9 December 1949. Of the 13 candidates examined, 9 passed and 4 were relegated.

The successful candidates are as follows:

| | |
|----------------------------|----------------|
| Caldecott, E. M. (Miss) | Menzies, D. S. |
| Chapman, D. E. | Moodie, E. G. |
| Dennis, O. R. | Page, D. E. |
| Jackson, G. C. | Simpson, R. T. |

Lauwers, L. A.

R.I.B.A. Final Examination

The following candidates have been awarded a Distinction in Thesis: Mr. Peter A. Clarke [Student]; Mr. John H. Finch [Student].

COMPETITIONS

Competition for War Memorial for Victoria College, Jersey

The Association of Old Victorians invite architects of British nationality to submit designs in competition for proposed War Memorial Buildings in the form of a small Art School at Victoria College, Jersey, C.I. Assessor: Mr. A. E. O. Geens [F]. Premiums: £75, £50, £25.

Last day for submitting designs: 3 April 1950. Conditions may be obtained on application to Mr. A. H. Worrall, Hon. Treasurer, The Association of Old Victorians, 25 Cleveland Road, Jersey, C.I. Deposit £1 1s.

Civic Hall, Guildford

The Guildford Borough Council invite architects registered in the United Kingdom to submit designs in competition for the Civic Hall which they propose to erect in Guildford.

Assessor: Mr. G. A. Jellicoe [F].

Premiums: £1,000, £500, £250.

Last day for submitting designs: 30 April 1950. Conditions may be obtained on application to the Town Clerk, Municipal Offices, Guildford. Deposit £2 2s.

Competition for Medical Buildings Extension, Edinburgh University

The University of Edinburgh invite architects to submit designs in competition for an extension to the Medical Buildings to be erected on a site on the north side of George Square, Edinburgh.

Assessor: Mr. A. G. R. Mackenzie, A.R.S.A. [F].

Premiums: 1,000 gns., 600 gns., 300 gns.

Last day for submitting designs: 30 September 1950.

Conditions may be obtained on application to the Secretary of the University, Edinburgh. Deposit £2 2s.

Competition for the Design of Concrete Bridges

The Cement and Concrete Association invite engineers and architects to submit designs in competition for prestressed, reinforced or plain concrete bridges over motorways.

Assessors: Sir Percy Thomas, O.B.E. (Past President); Mr. J. Cuerel, B.Sc., M.I.C.E.; Mr. A. Moller, M.I.Struct.E.; Mr. E. John Powell, M.I.C.E., M.I.Mun.E.; Mr. J. Reed, B.Sc., M.I.C.E., M.I.Struct.E., M.Cons.E.

Premiums: £500, £300, £200.

Last day for submitting designs: 31 May 1950.

Conditions may be obtained on application to the Cement and Concrete Association, 52 Grosvenor Gardens, S.W.1. Applications must be accompanied by a postal order for one shilling.

Norfolk Education Committee: Competition for a County Modern (Secondary) School at Hunstanton

The Norfolk Education Committee invite architects resident in Great Britain to submit designs in competition for a County Modern (Secondary) School at Hunstanton to accommodate 450 mixed pupils.

Assessor: Mr. Denis Clarke Hall [F].

Premiums: £500, £250, £150.

Last day for submitting designs: 11 April 1950.

Conditions may be obtained on application to Mr. W. O. Bell, Chief Education Officer, Norfolk Education Committee, Stracey Road, Norwich. Deposit £2.

Architectural Competition: Nairobi City Hall

The Municipal Council of Nairobi, Kenya, invites architects resident in the United Kingdom and all British Dominions, Colonies and Dependencies to submit designs in competition for new City Halls and Offices which it proposes to erect in Nairobi.

Assessor: Prof. L. W. Thornton White [F], Cape Town.

Premiums: £550, £450, £250.

Last day for posting designs: 31 August 1950.

Last day for questions: 20 April 1950.

Conditions may be obtained on application, preferably by air mail, to the Town Clerk, P.O. Box 651, Town Hall, Nairobi, Kenya. Deposit £2 2s.

Proposed Memorial to the Royal Naval Patrol Service of the 1939-45 War at Lowestoft

The Imperial War Graves Commission invite architects who are ex-serving full time members of His Majesty's Forces to submit designs in competition for a Memorial which they propose to erect on a site in Bellevue Park, Lowestoft, to commemorate the names of officers and men of the Royal Naval Patrol

Service fallen in the 1939-45 War who have no known graves.

Assessor: Mr. Edward Maufe, R.A. [F].

Premiums: £100, £60, £30.

Last day for submitting designs: 26 May 1950.

Conditions may be obtained on application to The Secretary, Imperial War Graves Commission, 32 Grosvenor Gardens, S.W.1. Deposit £1. Applicants for the Conditions must state: (a) their architect's registration number, (b) the branch of H.M. Forces in which they served.

ALLIED SOCIETIES

Changes in Officers and Addresses

North Staffordshire Architectural Association. President, Mr. R. J. Willis [A], 'Newstead', Standon, near Stafford. *The Royal Architectural Institute of Canada*. Executive secretary, Miss Mary L. Bilton (in place of Mrs. Anne M. Barstow). Address continues to be 1323 Bay Street, Toronto, Ontario, Canada.

Hampshire and Isle of Wight Architectural Association Annual Dinner

The twelfth Annual Dinner was held at the Polygon Hotel, Southampton, on 3 February, and Mr. A. B. Knapp-Fisher, F.S.A., Vice-President, represented the R.I.B.A. Mr. Ernest Bird [F], President of the Association, who presided, proposed the toast of 'Local Government Authorities in Hampshire and the Isle of Wight' and laid stress on the encouragement the Association gave to the training of young architects. On housing he hoped the end of austerity would one day leave members of the profession free and unfettered to design and build houses that were the country's rightful architectural heritage. The Mayor of Southampton, Alderman P. W. Blanchard, M.B.E., J.P., and the Mayor of Winchester, Councillor C. A. Taylor, J.P., responded.

Mr. F. L. Freeman, M.A., Chief Education Officer for Southampton, proposed the toast of 'The R.I.B.A. and its Allied Societies', and this was responded to by Mr. Knapp-Fisher, who in his speech said present times were a challenge and an opportunity to architects, a challenge 'because the whole structure of the profession is undergoing certain changes and architects have to fit in with those changes', and an opportunity 'because it is for architects during the austerity period to extract every pennyworth of value from the money and materials at hand'. Their work, said Mr. Knapp-Fisher, still had to possess quality and be of as high a standard as possible: that was a clear duty to the community.

The toast of the guests was proposed by Colonel R. F. Gutteridge, T.D. [F], Vice-President of the Association, and Mr. W. G. Hallum, President, Southampton and District Association of Building Trade Employers, responded.

There were 226 members and guests present, and the Chapters of the Association were well represented.

Sheffield, South Yorkshire and District Society of Architects and Surveyors

The second Dinner-Dance of this Society was held on 9 February at the Royal Victoria Hotel, Sheffield, and was attended by some 200 members and friends. The function was attended by the President of the R.I.B.A., Mr. Michael T. Waterhouse, M.C., and Mrs. Waterhouse.

The President of the Society, Professor S. Welsh, M.A., B.Arch. [F], briefly proposed the toast of the R.I.B.A. coupled with the Royal Institution of Chartered Surveyors, and in his reply to the toast Mr. Waterhouse made some very interesting references to the way building is organized in America.

Northern Architectural Association First Post-War Annual Dinner

For the first time since the war the Association held its Annual Dinner in the Royal Station Hotel on 10 February. The President of the R.I.B.A., Mr. Michael T. Waterhouse, was the principal guest. Other guests included the Mayor and Sheriff of Newcastle, and the local chairmen of various professional bodies. The toast to the R.I.B.A. and Allied Societies was proposed by Councillor Robert Parker, F.R.I.C.S., F.A.I., Chairman of the Northumberland and Durham Branch of the Royal Institution of Chartered Surveyors, and the President of the R.I.B.A. replied. Mr. A. Newton Thorpe [F], President of the York and East Yorkshire Architectural Society, attended as a representative of the Allied Societies. The attendance at the dinner was 175. After the dinner there was dancing until 1 a.m.

The Royal Incorporation of Architects in Scotland
The R.I.A.S. 1950 Annual Convention is being held in Edinburgh on 2 and 3 June.

GENERAL NOTES

Decorations and Distinctions

Major G. H. Hawkins, R.A. (T.A.) [A] has been awarded the Territorial Efficiency Decoration (London Gazette Supplement, 30 December 1949). Mr. D. E. Wright, O.B.E. [L] has been awarded the Territorial Efficiency Decoration (London Gazette Supplement, 11 November 1949).

R.I.B.A. Golfing Society

An interesting fixture list for the coming season has been arranged, including a golfing weekend at the Royal Norfolk Golf Club, Bawdsey, on Saturday and Sunday, 1 and 2 July. The fixtures include matches with the Building and Allied Trade, the Institution of Civil Engineers, the London Master Builders' Association, and the Royal Institution of Chartered Surveyors' Golf Clubs.

Will all members and students wishing to join the R.I.B.A. Golfing Society communicate at once with the hon. secretary, Mr. Eric H. Firmin [A], 10 Manchester Square, London, W.1 (WELbeck 2840), as he will shortly be sending out the printed fixture cards for 1950.

East: Alan George, Pontefract.

Evans: Dinah Margaret (Miss), Scarborough.
Faure: Lorette Talitha, (Miss), B.Arch. (Cape), Durban, S. Africa.

Finch: John Herbert, Chelmsford.

Fuller: Geoffrey Mason, Dip.Arch. (The Polytechnic), Ipswich.

Gowan: James.

Graham: Gordon, Dip.Arch. (Nott'm), Nottingham.

Greeves: Thomas Affleck, B.A. (Arch.) (Cantab).

Griffiths: James Elwyn, Dip.Arch. (Cardiff), Aberdare.

Gupte: Manohar Gajanan, Bombay, India.

Hare: Kenneth, Newcastle-upon-Tyne.

Hartley: Michael Bernard, Krugersdorp, Transvaal, S. Africa.

Hill: Ian Charles, Dip.Arch. (Birm), Birmingham.

Hill: John Gordon.

Hillary: Richard George, Auckland, New Zealand.

Hiner: John Peter, A.A. Dipl., Chelmsford.

Hoadley: Charles Prior, Auckland, New Zealand.

Hobart: Leonard Frederick, Dip.Arch. (The Polytechnic).

Jones: Geoffrey Berrington, B.Arch. (L'pool), Wallasey.

Kakajiwala: Salehbhai Tayeballi, Bombay, India.

Kennett: Dennis Victor, Dip.Arch. (The Polytechnic).

Khan: Mohamad Ghousullah, B.A. (Madras), Hyderabad (Deccan), India.

Kirtikar: Kunjibihari Anandrao, Calcutta, India.
Klempman: Charlotte (Miss), B.Arch. (Rand), Johannesburg, S. Africa.

Kovalevsky: Boris David, Dip.Arch. (The Polytechnic).

Large: John Kerr, Nottingham.

Levinsohn: Ray (Miss), B.Arch. (Rand), Johannesburg, S. Africa.

Lingard: Brian Hallwood, Cheadle Hulme, Cheshire.

Lloyd: Betty (Miss), B.Arch. (L'pool), Birkenhead.

Lochner: Christiaan Lodewyk, Stellenbosch, Cape Province, S. Africa.

Macintyre: Alastair Duncan, B.Arch. (L'pool), Dumfries.

McLean: James Frederick, Dip.Arch. (The Polytechnic), Guernsey, C.I.

Maddison: William Hall, B.Arch. (Dunelm), Wylam, Northumberland.

Maitland: Richard Macleod, A.A. Dipl.

The following officers have been elected for 1950: President, Sir Giles Gilbert Scott, O.M., R.A.; Captain, W. R. F. Fisher [F]; Committee, H. St. John Harrison [F], H. L. Bloomfield [F]. John Grey [F], and A. H. Watkins [L]; Hon. Secretary and Acting Treasurer, E. H. Firmin [A], 10 Manchester Square, London, W.1.

School of Planning and Research for Regional Development: Examination Results

On 27 January 1950 the External Examiner of the Town Planning Institute gave his final award on the theses so far submitted by Members of the Diploma Course 1948/49. The results are as follows: Honours Diploma: G. D. Frankish [A]. General Distinction: D. P. Freeman [A], N. R. F. Collins [A]. Distinction in Theses: E. Clunies-Ross [A], D. N. Gupta, B.E. (Calcutta), H. M. Reid [A]. Pass: R. E. Carter [A], J. A. Griffiths, K. Z. Hussain [A], D. A. W. Lovejoy [A], V. H. Naidu [A], Neroli Wilkins, M.A. Geog. (New Zealand), V. W. Worley [A], J. P. Blockley [A], M. Kirsten Borland [A], June Gardner [A], J. N. Graham [A], H. R. Hyne [A], R. R. Lockyer [A], H. V. Sprince [A].

Manwaring: Reginald Ernest, Kingston-on-Thames, Surrey.

Maxwell: Robert Millar, B.Arch. (L'pool), Downpatrick, Co. Down.

Mitchell: Thomas, D.A. (Dundee), Cupar-Fife, Scotland.

Mollin: Valerie Mary (Miss), Dip.Arch. (Cardiff), Barry, Glamorgan.

Morgan: Alan, Dip.Arch. (The Polytechnic).

Narwekar: Jayant Shridhar, Bombay, India.

Orr: David Selwyn, Wellington, New Zealand.

Ospalak: Paul Ivan, Dip.Arch. (The Polytechnic).

Pundlik: Ratnakar Gangadhar, Bombay, India.

Reid: John Robson.

Richards: Alan Kenneth Hamer, Dip.Arch. (The Polytechnic), Maidenhead.

Roberts: Alun, B.Arch. (Wales), Taffs Well, Glamorgan.

Samson: William Richard, Arbroath, Angus.

Seeley: Albert William James, Dip.Arch. (The Polytechnic).

Shackleton: Vera Wendy (Miss), Banbury.

Sharma: Charan Das, Delhi, India.

Sherratt: Frank Edward, B.Arch. (L'pool), Northwich, Cheshire.

Shewring: Colin Ivor Michael.

Shunn: John Mossop, Johannesburg, S. Africa.

Smith: Michael Vivian Stuart.

Smithson: Alison Margaret (Mrs.), Dip. Arch. (Dunelm).

Steinberg: Percy Harold.

Stevens: Aubrey John, Dip.Arch. (The Polytechnic), Newcastle, Lincolnshire.

Stewart: John Alexander, Cheam.

Taylor: Eric, Singapore.

Thompson: Ernest Brennan, B.Arch. (Sydney), Christchurch, New Zealand.

Thorne: George Edward.

Thorpe: Raymond Armstrong, Auckland, New Zealand.

Tiwari: Loke Nath Gadadhar Prasad, Jubbulpore, C.P., India.

Tomlin: Derek Philip, B.Arch. (Cape Town), Cape Town, S. Africa.

Toni: Francis John Peter, Brisbane, Australia.

Townsend: Patricia Anne (Miss), B.Arch. (Wales), Abergavenny, Mon.

Vautier: Phillip Lawson, Auckland, New Zealand.

Volhard: Reiner, Dip.Arch. (The Polytechnic).

Walton: Patricia Addinsell (Miss), Dip.Arch. (The Polytechnic).

Warner: John, Mansfield.

Worby: Leonard Philip.

Membership Lists

ELECTION: 7 MARCH 1950

The following candidates for membership were elected on 7 March 1950.

AS HON. FELLOW (1)

Kelly: Sir Gerald Festus, President of the Royal Academy.

AS FELLOWS (8)

Darbyshire: Major Leslie [A 1933], Nottingham.

Hebler: Bernard Adam, M.A. (Oxon) [A 1934].

Lock: Cecil Max [A 1932], Gosport.

Melvin: James, A.A. Dipl. [A 1936].

Oakes: Colin St. Clair, M.B.E., T.D. [A 1931], Nottingham.

Risdon: Frank Heriot [A 1936], Beckenham, Kent.

Robertson: George William [A 1928], Glasgow.

Upton: Herbert Cooper [A 1935], Malaya.

AS ASSOCIATES (94)

Achwal: Madhao Bhaskar, Kalyan, Thana Dist., India.

Allan: Harry Williams Roy, D.A. (Dundee), Inverness.

Baker: William David, Dip.Arch. (Cardiff), Barry, Glamorgan.

Barton: John Griffith, Dip.Arch. (The Polytechnic).

Beard: James Albert, B.Arch. (N.Z.), Wellington, New Zealand.

Beck: John, Dip.Arch. (Dunelm), Newcastle-upon-Tyne.

Bennett: Simon de Courcy, Knebworth, Herts.

Beresford: Peter George, Birmingham.

Bhada: Nadir Jamsetji, Bombay, India.

Biggar: John Wilson, Umtali, S. Rhodesia.

Castiglione: Alfonso Roger, Baghdad, Iraq.

Cheyne: John Gilbert, Cape Town, S. Africa.

Chokshi: Rajendra Kanaiyalal, Bombay, India.

Clare: Edwin Douglas Hensman, Dip.Arch. (The Polytechnic).

Clark: Aileen Mary (Mrs.).

Clarke: Peter Anthony.

Cocker: John Stanley.

Cole: David.

Cotton: Kenneth Sidney, Gidea Park, Essex.

Craven: Michael Loftus.

Crisp: Peter Norman.

Dunn: Martin Kenneth, Dipl.Arch. (L'pool), Southampton.

Wright: Reuben Johnson Oluwole, D.A. (Edin), Edinburgh.

AS LICENTIATES (8)

Colchester: James David.

Dawkins: William Harry Cecil, Pontypool.

Dixon: Thomas, Chatham.

Mansbridge: Sydney Henry Edric, Newport, I.O.W.

Parker: Reginald John.

Smith: Trevor.

Turner: John Raymond, Nairobi, Kenya, East Africa.

Williamson: Herbert Leonard, Birmingham.

ELECTION: 4 APRIL 1950

An election of candidates for membership will take place on 4 April 1950. The names and addresses of the candidates with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 3 April 1950.

The names following the applicant's address are those of his proposers.

AS HON. FELLOW (1)

Esher: The Viscount, The Rt. Hon. Oliver Sylvain Babiol, M.B.E., 9 North Audley Street, W.1. Proposed by the Council.

AS HON. ASSOCIATE (1)

Montgomery: Hugh Roger Greville, M.C., Snells Farm, Amersham Common, Bucks. Proposed by the Council.

AS FELLOWS (18)

Allen: Joseph Stanley, B.Arch., M.T.P.I. [A 1922]. Professor in Town and Country Planning, Kings College, University of Durham, Newcastle-on-Tyne; North House, Longbenton, Northumberland. Prof. W. B. Edwards, Prof. L. B. Budden, J. H. Forshaw.

Crossley: Frederick Hamer, Dipl.Arch. (L'pool) [A 1925] County Architect of Derbyshire, County Offices, St. Mary's Gate, Derby; 'Netherby', Avenue Road, Duffield, near Derby. Herbert Shearle, D. Wynne Thomas, E. H. Ashburner.

Dyson: William Parker, M.A. [A 1933]. 1 Scroope Terrace, Cambridge; 13 Grosvenor Crescent, S.W.1; Punch's Grove, Hilton, Huntington. J. Macgregor, J. M. Easton, Peter Bicknell.

Holt: John, Dip.Arch. (Dunelm), A.M.T.P.I., Dip.T.P. [A 1936] Architects Dept., Bristol Aeroplane Co., Filton, Bristol; 41 Burley Crest, Downend, Bristol. Eric Ross, Prof. W. B. Edwards, D. du R. Aberdeen.

Preston: Frederick Leslie, A.A. Dipl. [A 1926]. Messrs. Easton and Robertson, 54 Bedford Square, W.C.1; 'Kilbracken', Meadow Road, Ashtead, Surrey. Howard Robertson, J. M. Easton, C. H. James.

Senior: Denis [A 1932] County Architects Department, Essex County Council, County Hall, Chelmsford; 'Byngland' Rainsford Avenue, Chelmsford, Essex. H. Connolly, R. C. Foster, George Fairweather.

Thoms: Thomas Hill [A 1932], 21 South Tay Street, Dundee; 40 Middlebank Crescent, Dundee. John Needham, G. C. Young, J. D. Mills. and the following Licentiates who have passed the qualifying Examination:

Burley: Sidney Frederick, School of Architecture, Northern Polytechnic, Holloway, N.7; 14

Maryland Road, N.22. T. E. Scott, H. Bramhill, A. H. Archard.

Haysom: Ernest William, Ministry of Health, Moat Lane, Birmingham, 5; 'Overdale', 168 Station Road, Knowle, Warwickshire, G. C. Gadd, A. C. Bunch, S. T. Walker.

Lyons: Eric Alfred, Mill House, Bridge Road, East Molesey, Surrey. E. M. Fry, Howard Lobb, E. D. Mills.

Ruhemann: Frederick Abraham, 46 Belsize Square, N.W.3. The Hon. Godfrey Samuel, Bertram Carter, Clough Williams-Ellis.

Sibthorp: Thomas, A.R.I.C.S., A.M.T.P.I., Haddo House, 163 Highgate Road, Highgate, N.W.5; 48 Edencourt Road, Streatham, S.W.16. Cecil Kennard, A. M. Chitty, A. J. Thomas.

Singer: Oscar, 14 Wallace Court, N.W.1. E. M. Fry, C. G. Mant, P. M. Andrews.

Sneller: Robert John, Ministry of Works, Reading; 302 London Road, Earley, Reading. W. A. Rutter, P. M. Andrews, C. G. Mant.

Wood: Frank, Department of Health for Scotland, Edinburgh; 54 Duddingston Road West, Portobello. Leslie Grahame-Thomson, J. R. McKay, A. H. Mottram.

and the following Licentiates who are qualified under Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925:

Fitt: William James, Chief Architect (Display Construction) Festival of Britain 1951, 16 Lennox Gardens, S.W.1. 26 Dundonald Drive, Leigh-on-Sea, Essex. L. D. Tomlinson, F. W. Beech, B. W. Oliver.

Parrott: Stanley Charles, 45 Oakley Road, Luton. Applying for nomination by the Council under Bye-law 3 (d).

Symonds: Robert Wemyss, 8 Shelley Court, Tite Street, Chelsea, S.W.3. Robert Atkinson, Michael Tapper, W. B. Simpson.

AS ASSOCIATES (127)

The name of a school, or schools, after a candidate's name indicates the passing of a recognized course.

Ashton: Henry Gerald [Special Final], 21 Park Avenue, Chelmsford. Gordon O'Neill, A. E. Wiseman, Roff Marsh.

Ball: Alfred [Final], 20 South Island Place, Clapham, S.W.9. J. W. Williamson, H. A. Porter, Bertram Carter.

Bamber: Douglas Haig (Major) [Special Final], 30 Gosforth Road, Blackpool, N.S. C. H. MacKeith, Halstead Best, F. L. Lumb.

Bannington: Ernest Eugene [Special Final], 98 Elmdon Park Road, Solihull, Birmingham. A. Douglas Jones, C. H. Elkins, R. Hellberg.

Barron: Andrew Oliver Chalmers, D.A. (Dundee) (Dundee Coll. of Art.: Sch. of Arch.), 10 Grove Road, West Ferry, Dundee. John Needham, W. Salmond, Donald Ross.

Beesley: Sidney [Special Final], 135A London Road, North Cheam, Sutton, Surrey. A. G. Alexander, W. A. Rutter, E. H. Banks.

Bell: Norman (Northern Poly. (London): Dept. of Arch.) 43 Wroughton Road, Clapham Common, S.W.11. T. E. Scott, A. F. B. Anderson, Robert Atkinson.

Berger: Bernard Stanley David [Final], 32 Deansway, Hampstead Garden Suburb, N.2. T. A. Lodge, N. S. Morris, C. W. Box.

Bicknell: Algar John Deaville [Special Final], 422, Upper Brentwood Road, Romford. C. C. Shaw, H. Conolly, J. J. Crowe.

Birch: Frederick Leslie [Special Final], 'Eagle Bird', Longwood Lane, Walsall. H. W. Hobbs, L. E. Harper, H. C. Bloomer.

Bloor: Geoffrey [Special Final], 67 Langdale Road, Liverpool 15. Prof. L. B. Budden, Donald Brooke, B. A. Miller.

Boak: James Leonard [Special Final], c/o Messrs. John S. Dow & Co., 5 Charlotte Street, Perth. William Williamson, G. B. Deas, W. E. Thomson.

Bollon: Clarence Montague [Special Final], 12 Routh Road, Wandsworth Common, S.W.18. W. A. Rutter, A. C. Hopkinson, C. G. Mant.

Bowyer: Nancy (Miss), Dip. Arch. (Nott'm) (Nottingham Sch. of Arch.), 19 Greendale Road, Nottingham. F. A. Broadhead, A. E. Eberlin, T. C. Howitt.

Brewis: Francis Gordon, Dip. Arch. (Dunelm) (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne, Sch. of Arch.), 21 Cartington Road, North Shields. Prof. W. B. Edwards, J. H. Napper, D. L. Couves.

Brown: Ian Collin, Dip. Arch. (The Polytechnic) (The Poly. Regent Street, London: Sch. of Arch.), 42 Manor Park Drive, North Harrow, Middx. J. S. Walkden, Harry Moncrieff, S. P. Taylor.

Brown: Thomas Frank [Special Final], 31 Victoria Road, Chester. T. N. Cartwright, Lieut.-Colonel B. L. Sutcliffe, E. M. Parkes.

Bruce: John George [Special Final], 27 Clarendon Rise, S.E.13. Raglan Squire, G. R. Dawbarn, Miss G. W. M. Leverkus.

Bull: John Edward [Final], 115 Eastfield Road, Westbury-on-Trym, Bristol. G. D. G. Hake, T. H. B. Burrough, E. H. Button.

Bullen: Leslie Dowswell, Dip. Arch. (Manchester) (Victoria Univ. Manchester: Sch. of Arch.), 44 Westbourne Avenue, Leigh, Lancs. Prof. R. A. Cordingley, J. P. Nunn, Ernest Prestwich.

Burstow: Ralph Ernest [Final], 8 London Road, Bexhill-on-Sea, Sussex. C. F. Callow, Edgar Bunce, S. R. Pierce.

Caldecott: Eleanor Mary (Miss), Dipl. Arch. (U.C.L.) (Bartlett Sch. of Arch.: Univ. of London), 16 Scarsdale Villas, W.8. Prof. H. O. Corfianto, Robert Atkinson, A. F. B. Anderson.

Cavanagh: Andrew Leo. [Special Final], 17 Daresbury Road, Chorlton-cum-Hardy, Manchester, 21. Henry Elder, F. M. Reynolds, F. L. Halliday.

Ceal: Peter Henry, B.A. (Arch.) (Manchester) (Victoria Univ. Manchester: Sch. of Arch.), 'Kitley', Woodhead Road, Hale, Cheshire. Prof. R. A. Cordingley, F. C. Saxon, J. P. Nunn.

Chatton: Edwin George [Final], 27 Appleton Road, Heaton Chapel, Stockport. H. T. Seward, W. C. Young, Francis Jones.

Cheeseman: Edwin John [Final], 26 Grosvenor Avenue, Carshalton, Surrey. T. G. Crump, James Cannell, J. K. Hicks.

Clarke: Denys Gregory [Final], 26 Combe Park, Bath. G. D. G. Hake, T. H. B. Burrough, J. R. Edwards.

Dancer: James Kenneth [Special Final], 1 Alwen Street, Wordsley, Stourbridge. A. Douglas Jones, G. C. Gadd, A. R. Young.

Davies: Gwilym Ivor, A.R.I.C.S. [Special Final], 'Shamrock', 17 Llantarnam Road, Llantarnam, Nr. Newport, Mon. P. G. Budgen, Howard Williams, C. F. Bates.

Dawson: Stanley, Dipl. Arch. (Leeds) (Leeds Sch. of Arch.), Upcott Hall, Bishops Hull, Nr. Taunton. R. O. Harris, H. S. W. Stone, Clarence Bacon.

- Dixon:** Norman John [Final], 15 Fulwood Gardens, Twickenham. H. S. Gardiner, N. L. Reece, J. S. Thomson.
- Dodd:** Geoffrey Breton Davenport [Final], 41 Bakers Lane, Churcorthwaite, Southport. Norman Jones, Leonard Rigby, H. D. Dodd.
- Dyer:** Allan John [Special Final], 72 The Grove, West Wickham, Kent. H. G. Coulter, J. W. Buchanan, H. K. Ablett.
- Fenter:** Donald George, Dip.Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 19 Wellington Crescent, Old Trafford, Manchester, 16. Prof. R. A. Cordingley, J. P. Nunn, F. L. Halliday.
- Fenton:** Reginald Frank Sydney [Special Final], 4 Weybourne Close, Southend-on-Sea, Harold Conolly, Niel Martin-Kaye, C. W. Box.
- Finch:** Richard Wyndham (The Poly., Regent Street, London: Sch. of Arch.), 32 Bedford Road, Harrow, Middlesex. Peter Moro, C. G. Stillman, D. L. Lasdun.
- Ford:** John Arthur [Special Final], 21 Sussex Gardens, Hook, Surbiton, Surrey. J. S. Walkden, C. G. Stillman, David Jenkin.
- Gallagher:** Herbert Henry Asquith [Special Final], 'Poppies', Sunningdale Avenue, Biggin Hill, W. A. Rutter, W. F. Granger, C. G. Mant.
- Guard:** Wilson Perrott [Special Final], 79 Merrion Square, Dublin. Vincent Kelly, J. J. Robinson, R. T. Green.
- Gutteridge:** Geoffrey Fowler, M.A. Cantab. [Final], 45 Westwood Road, Southampton. J. Macgregor, A. L. Roberts, A. E. Geens.
- Hammond:** Gordon George William [Final], 64 Kings Head Lane, Uplands, Bristol, 3. J. N. Meredith, T. W. East, H. F. Trew.
- Heath:** David Nigel [Final], 82 Basford Park Road, Newcastle, Staffordshire. J. B. Adams, Clifton Edwards, J. R. Pigott.
- Hemmings:** Lionel George [Special Final], 49 Oaktree Gardens, Bromley, Kent. Hubert Lidbetter, T. F. Ford, C. W. Box.
- Henley:** Jack Alphonso [Special Final], 53 Blackmarston Road, Hereford. Applying for nomination by the Council under the provisions of Bye-law 3 (d).
- Hesford:** Arnold [Final], 'Chalford', Cutnook Lane, Irlam, Nr. Manchester. H. T. Seward, Peter Cummings, Henry Nurse.
- Higginson:** Frederick St. George (Edinburgh Coll. of Art: Sch. of Arch.), 83 Heathfield Road, Wavertree, Liverpool, 15. J. S. Walkden, H. J. Rowse, Colonel J. M. Arthur.
- Highwood:** David Charles, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 7 Albion Road, Sutton, Surrey. J. S. Walkden, R. G. Covell, David Jenkin.
- Hollins:** Peter Brian [Final], 'Glenbower', Pine Walk, Southampton. L. S. Stanley, Prof. H. O. Corfiato, Colonel R. F. Gutteridge.
- Howell:** Cuthbert Llewelyn [Special Final], 21 Croxton Road, Dulwich, S.E.21. Z. Sirokin, P. M. Andrews, W. F. Granger.
- Hughes:** Geoffrey Edwin, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 75 Elgin Crescent, W.11. J. S. Walkden, T. A. Lodge, N. E. S. Morris.
- Humphrey:** Ernest [Special Final], 110 Old Lodge Lane, Purley. G. D. Harbron, Allanson Hick, Lieut.-Colonel J. P. Taylor.
- Hunt:** Stanley Charles [Special Final], 105 Lady Lane, Chelmsford. Roff Marsh, E. P. Archer, Lieut.-Colonel F. J. Taylor.
- Inglis:** Thomas [Edinburgh Coll. of Art: Sch. of Arch.], 3 Winton Terrace, Edinburgh, 10.
- J. S. Walkden, J. F. Matthew, Leslie Grahame-Thomson.
- Jackson:** George Cyril (Victoria Univ., Manchester: Sch. of Arch.), 1 King's Close, Arnside, Carnforth, Lancs. Prof. R. A. Cordingley, J. P. Nunn, F. L. Halliday.
- Judges:** Alfred Charles, M.B.E. [L] [Special Final], 1 Hare Court, Temple, E.C.4. G. Langley-Taylor, Thomas Rayson, Prof. Sir Patrick Abercrombie.
- Kirby:** George Alfred [Special Final], 6 Truslove Road, West Norwood, S.E.27. J. A. Dempster, W. A. Woodland, W. M. Taylor.
- Kitching:** Robert Arthur, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 47 Fairmount Road, Brixton Hill, S.W.2. J. S. Walkden, A. C. Tripe, David Jenkin.
- Knight:** Lawrence Peterson [Special Final], 1077 Shettleston Road, Glasgow, E.2. J. A. Coia, L. H. Ross, Prof. W. J. Smith.
- Koss:** Ward, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 6 Hungerford Road, N.7. J. S. Walkden, Peter Moro.
- Kreeger:** Bernard, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 58 Merrion Avenue, Stanmore. J. S. Walkden, Peter Moro, Raglan Squire.
- Laker:** Robert Alexander [Special Final], 'Prilcedes', Frog Grove Lane, Guildford. Edwin Williams, Dr. J. L. Martin, W. J. Durnford.
- Langston:** Albert Henry [Special Final], 13 Stukeley Hill, Great Stukeley, Huntingdon. T. E. Scott, T. H. Longstaff, B. W. Stuttle.
- Lee:** Norman William [Special Final], 9 Northwick House, St. John's Wood Road, N.W.8. W. L. Clarke, B. W. L. Gallanagh, Thomas Bilbow.
- Le Pelley:** Michael Gloor, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 44 Ellerton Road, S.W.18. J. S. Walkden, Peter Moro, Dr. J. L. Martin.
- Lewis:** Ralph Henry (The Poly., Regent Street, London: Sch. of Arch.), 32 Basing Hill, N.W.11. E. D. Mills, J. S. Walkden, David Jenkin.
- Longville:** Henry [Final], 21 Zion Terrace, Newcastle Road, Sunderland. Prof. W. B. Edwards, J. H. Napper, S. W. Milburn.
- McEwen:** Frederick Charles [Final], 47 Patterdale Terrace, Gateshead, 8, Co. Durham. J. H. Napper, C. A. Harding, F. A. Child.
- MacGovern:** Noel Richard, B.A. [Special Final], Dromin, Delgany, Co. Wicklow. Raymond McGrath, J. O. H. Hughes, J. V. Downes.
- Mackillop:** Angus Macintyre, D. A. (Dundee) (Dundee Coll. of Art: Sch. of Arch.), 5 Viewfield Place, Perth. W. E. Thomson, G. C. Young, John Needham.
- MacManus:** George Robert Muir [Final], 96 The Vale, Golders Green, N.W.11. G. D. G. Hake, A. F. French, E. H. Button.
- McMenan:** William Murdoch Rigg [Final], 71 Rannoch Drive, Bearsden, Dumbartonshire. Alexander Wright, John Stewart, Prof. W. J. Smith.
- Mendelsohn:** Edward, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 2 Daylesford Avenue, Putney, S.W.15. J. S. Walkden, W. W. Wells-Coates, David Jenkin.
- Mendleson:** Joseph [Special Final], 61 Kew Bridge Court, W.4. Hugh Casson, Raglan Squire, L. S. Stanley.
- Menzies:** Duncan Stewart, D.A. (Glasgow Sch. of Arch.), 3 Cochran Street, Paisley. Prof. W. J. Smith, James Taylor, A. G. Henderson.
- Miller:** Peter Gordon [Final], 69 (A), Island Farm Road, West Molesay, Surrey. Applying for nomination by the Council under Bye-law 3 (d).
- Moorcroft:** Roy Langford [Final], 129 Styall Road, Gatley, Cheshire. Henry Elder, E. M. Parkes, A. Douglas Jones.
- Morrell:** Peter Frederick, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 39 Orchard Road, Twickenham. J. S. Walkden, Anthony Minoprio, David Jenkin.
- Mountford:** Edwin Arthur [Special Final], 36 Cocknagoe Road, Longton, Stoke-on-Trent. J. R. Piggott, G. L. Broadbent, Clifton Edwards.
- Mountford:** Jean Martindale (Miss), Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 3 Marble Hill Gardens, Twickenham. J. S. Walkden, David Jenkin, A. G. MacDonald.
- Oldfield:** Eric Francis (Northern Poly. (London): Dept. of Arch.), 18 Limes Avenue, North Finchley, N.12. T. E. Scott, A. F. B. Anderson, Robert Atkinson.
- Oliver:** Walter James [Special Final], 'Penfield', 14 Strangman Avenue, Thundersley, Essex. A. S. Belcham, P. G. Hayward, P. R. Fincher.
- Owles:** Alan Beaumont [Special Final], 'Drayton Court', 141 Drayton Gardens, West Drayton, Middlesex. R. W. H. Vallis and applying for nomination by the Council under the provisions of Bye-law 3 (d).
- Page:** Derek Edward (Bartlett Sch. of Arch.: Univ. of London), Boisdale, Copperkins Lane, Chesham Bois, Bucks. Prof. H. O. Corfiato, D. du R. Aberdeen, Thomas Ritchie.
- Pembury:** Gerald Griffin [L] [Special Final], 153 Wolsey Drive, Kingston-on-Thames. C. D. Andrews, C. G. Stillman, A. E. Bullock.
- Polkinghorne:** Richard William Joseph, A.R.I.C.S. [Special Final], 47 Essex Street, Strand, W.C.2. L. A. Chackett, L. A. Culliford, P. G. Freeman.
- Pool:** Jane Ruscombe (Miss) [Final], 39 Carlyle Square, S.W.3. E. M. Rice, H. V. Lobb, F. R. S. Yorke.
- Poole:** Roger Eaton [Final], 5 Shrubbery Walk, Weston-super-Mare. B. I. Day, T. A. Skinner, G. D. G. Hake.
- Price:** June Constance Ethne (Miss), B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 43 Ballantrae Road, Mossley Hill, Liverpool, 18. Prof. L. B. Budden, B. A. Miller, Donald Brooke.
- Reynolds:** Peter John [Final], 33 Little Clarence Street, Oxford. S. E. Urwin, Thomas Rayson, David Beecher.
- Richardson:** Brian John, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 'Rocks Forge', Knockholt, Nr. Sevenoaks, Kent. J. S. Walkden, A. C. Tripe, David Jenkin.
- Roberts:** Haworth Owen [L] [Special Final], 33 Warwick Road, Coventry. Prof. Basil Ward, Rolf Hellberg, A. H. Gardner.
- Rooker:** Leslie Donald [Final], 78 Riversdale Road, Hull. Joseph Konrad, Edgar Farrar, G. D. Harbron.
- Rowe:** James Stewart [Final], 'Chesswell', London Road, Shrewsbury, Salop. H. E. Matthews, C. Fifield, A. G. Chant.

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Cranme
G. M. A
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London
N.S. J
Carter,
Todhun
Banstea

- Royle:** Thomas Gilbert (Victoria Univ. Manchester: Sch. of Arch.), 22 Albert Road, Cheadle Hulme, Cheshire. Prof. R. A. Cordingley. P. G. Fairhurst, J. P. Nunn.
- Rye:** George William Arthur Francis [Special Final], 29 Chamberlain Avenue, Maidstone, Sidney Loweth, R. T. Green, L. H. McDermott.
- Sawyer:** Richard Loraine [Final], 109 Bishopthorpe Road, York. A. N. Thorpe, C. Leckenby, J. S. Syme.
- Sharp:** Bruce Cunningham [Special Final], 40 Hillfield Park, Winchmore Hill, N.21. R. S. Nickson, T. E. Scott, and applying for nomination by the Council under Bye-laws 3(d).
- Sharp:** James John (Capt.) [Special Final], 49 Elmwood Park Road, Solihull, Birmingham. A. Douglas Jones, C. H. Elkins, R. Hellberg.
- Skingsley:** Eric Stanley [Special Final], 'Merriwood', Ockham Road, East Horsley. Edwin Williams, E. S. Clarkson, Terence Carr.
- Slater:** Roger Eric Macdonald [Special Final], 195 Rosendale Road, West Dulwich, S.E.21. J. A. Dempster, F. Q. Farmer, C. W. Box.
- Smart:** Hugh Alexander, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), c/o 29 Fairmount Road, S.W.2. J. S. Walkden, Anthony Minoprio, David Jenkin.
- Smith:** John Edmund [Special Final], 3 Shanklin Avenue, Leicester. Kenneth Palmer, T. W. Haird, W. J. Prince.
- Smithurst:** Alan Harry [Special Final], Main Road, Gedling, Nottingham. E. W. Roberts, E. Frear, A. E. Eberlin.
- Snowdon:** William [Special Final], 'Hillcrest', Heddon - on - the - Wall, Newcastle - on - Tyne. Prof. W. B. Edwards, J. H. Napper, J. A. Clarke.
- Souter:** Allen Ernest [Final], 79 Tadworth Road, Cricklewood, N.W.2. C. W. Box, Charles Blythin, M. de Metz.
- Sparrow:** Kenneth Geoffrey, M.A. [L] [Special Final], 4 Grove Green Road, Weaverling, Maidstone. Sidney Loweth, R. T. Green, C. J. Cable.
- Spittle:** Stanley Denys Trevor [Final], 7 Herschel Road, Cambridge. J. Macgregor, Peter Bicknell, H. C. Hughes.
- Stacey:** Stephen Leslie George [Special Final], The White House, Harmony Street, Rusthall, Tunbridge Wells, Kent. L. S. Stanley, T. R. Eltringham, W. F. Granger.
- Steptoe:** Charles Cyril [Special Final], 41 Friends Road, East Croydon. A. D. Sayers, J. K. Hicks, Charles Blythin.
- Stoneham:** Derrick William [Special Final], 130 Westmorland Avenue, Luton. P. B. Dunham, C. W. Box, W. R. Steel.
- Swarbrick:** Maurice Victor Donald [Special Final], 4A Union Street, Aldershot. G. M. Aylwin, A. J. Stedman, C. W. Box.
- Tatnall:** Derek Lloyd [Final], 40 Clarence Avenue, Ilford. D. W. Aldred, W. J. Walford E. W. Banfield.
- Taylor:** Gerald Roy [L] [Special Final], 29A Cranmore Lane, Aldershot. L. S. Stanley, G. M. Aylwin, A. J. Stedman.
- Taylor:** Joan Mary Clemence (Mrs.), Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 35 Highbury Place, N.5. J. S. Walkden, Peter Moro, Bertram Carter.
- Todhunter:** Sybil Elizabeth (Miss) [Final], 155 Banstead Road, Carshalton Beeches, Surrey.
- Applying for nomination by the Council under the provisions of Bye-law 3(d).
- Tough:** Jane McKendrick (Miss) [Final], 15 Buckstone Terrace, Edinborough, 10. J. R. McKay, A. H. Mottram, A. B. Gardner.
- Tugwell:** Percival Dennis [Special Final], White-ladies, Bure Road, Mudeford, Christchurch, Hants. R. A. Phillips, A. E. Geens, M. G. Cross.
- Wadsworth:** James Edward [Final], 7 Wade Street, Middleton Junction, Manchester. H. T. Seward, W. C. Young, F. L. Halliday.
- Wainwright:** Allan [Special Final], 8 Dickens Lane, Poynton, Stockport. H. T. Seward, W. C. Young, F. Chippindale.
- Waite:** Kenneth [Special Final], 43 Selwyn Avenue, Richmond, Surrey. J. E. M. Macgregor, A. S. Gray, E. H. Allsford.
- Walker:** Richard Plumer [Final], 100 Churchgate, Southport. Norman Jones, Leonard Rigby, Henry Elder.
- Wardley:** Joseph Arnold [Special Final], 'Overstone', Hartford Road, Huntingdon. W. A. Lea, P. J. J. Panter, L. S. Stanley.
- Werbeloff:** John Leslie, B.Arch. (Cape Town) (Passed a qualifying examination approved by the I.S.A.A.), 38 Fairhazel Gardens, N.W.6. Prof. L. W. T. White, O. Pryce Lewis, D. R. Harper.
- Williams:** Anthony Touzeau (Arch. Assoc. (London): Sch. of Arch.), The White Cottage, Keymer, Sussex. R. F. Jordan, C. H. Aslin, H. G. Goddard.
- Williams:** Christopher Liddell [Special Final], 'Ivy Cottage', 12 West Road, Congleton, Cheshire. E. T. Watkin, J. B. Adams, Clifton Edwards.
- Woodward:** Clifford [Special Final], 34 Burwell Drive, Grimsby. F. J. Searley, A. D. Sayers, W. A. Ross.
- Yeatman:** David George [Final], Tregenna House, Smithy Lane, Lower Kingswood, Surrey. A. G. S. Fidler, Sir Thomas Bennett, Anthony Minoprio.
- ELECTION: 20 JUNE 1950**
- An election of candidates for membership will take place on 20 June 1950. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A. not later than Saturday 17 June 1950.
- The names following the applicant's address are those of his proposers.
- AS FELLOWS (3)
- Bartlett:** Harold Edward [A 1933], 628-630 Bourke Street, Melbourne, C.1, Victoria, Australia. Looker Road, Montmorency, Victoria. Leighton Irwin, W. R. Laurie, G. L. Moline.
- Corlett:** Wilfred Shimmin, A.M.T.P.I. [A 1930], Government Architect, Federation of Malaya, Kuala Lumpur, Malaya. F. C. Haslam, C. S. M. Davidson, Thomas Scott.
- Rinaldi:** Raymond Clement [A 1937], 70 Coronation Buildings, Simmonds Street, Johannesburg, South Africa; 17 Collins Road, Melrose North, Johannesburg. L. G. Jackson, A. S. Furner, Gordon Leith.
- AS ASSOCIATES (16)
- The name of a school, or schools, after a candidate's name indicates the passing of a recognized course.
- Borkowf:** Riva (Miss), B.Arch. (Rand) (Passed a qualifying examination approved by the Council under Bye-law 3(d).
- I.S.A.A.),** 3 Page Street, Yeoville, Johannesburg, S. Africa. Applying for nomination by the Council under Bye-law 3(d).
- Connell:** David Edward, B.Arch. (Rand) (Passed a qualifying examination approved by the I.S.A.A.), 66 Eckstein Street, Observatory, Johannesburg, Transvaal, S. Africa. Applying for nomination by the Council under Bye-law 3(d).
- Fisher:** John David (Passed a qualifying examination approved by the R.A.I.A.), 374 Lt. Collins Street, Melbourne, Victoria, Australia. A. G. Stephenson, D. K. Turner, G. L. Moline.
- Goodings:** John (Passed a qualifying examination approved by the R.A.I.A.), 400 Collins Street, Melbourne, C.1, Victoria, Australia. W. J. Reed, H. M. Luyken, Leighton Irwin.
- Horsham:** Ronald John Eric [L] (Passed a qualifying examination approved by the I.S.A.A.), 'Ravensbourne', Stella Road, Plumstead, Cape Town, S. Africa. Prof. L. W. T. White, O. Pryce Lewis, D. R. Harper.
- Irwin:** James Campbell, O.B.E. (Passed a qualifying examination approved by the R.A.I.A.), 35 Barnard Street, North Adelaide, South Australia. L. Laybourne-Smith, J. L. S. Mansfield, Leighton Irwin.
- Josephides:** Alex P. [Special Final], 6 Passiades Street, Nicosia, Cyprus. C. W. Box, Trenwith Wills, T. J. Rushton.
- Litchfield:** Bruce Albert John (Passed a qualifying examination approved by the R.A.I.A.) Dept. of Works and Housing, Canberra, A.C.T. Australia. B. B. Lewis, B. J. Waterhouse, Mrs. Hilary Lewis.
- Marshall:** Keith Douglas (Passed a qualifying examination approved by the N.Z.I.A.), c/o P.O. Box 117, Christchurch, New Zealand. W. M. Page, and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(a).
- Melville:** James Hector, B.Arch. (Sydney) (Passed a qualifying examination approved by the R.A.I.A.), 63 Gordon Street, Balgowlah, Sydney, N.S.W., Australia. G. L. Moline, D. K. Turner, Prof. Leslie Wilkinson.
- Muller:** Peter Neil, B.E. (Adelaide) (Passed a qualifying examination approved by the R.A.I.A.), 4 Jean Street, Leabrook, South Australia. L. Laybourne-Smith, P. R. Claridge, O. A. Yuncken.
- Philip:** George Ross (Passed a qualifying examination approved by the R.A.I.A.), 35 Chelsea Street, Brighton, Victoria, Australia. A. G. Stephenson, G. L. Moline, D. K. Turner.
- Robinson:** Bruce Henry (Passed a qualifying examination approved by the R.A.I.A.), 22 Forrest St., Sunshine W.20, Victoria, Australia. Leighton Irwin, B. B. Lewis, J. F. D. Scarborough.
- Sathe:** Maheshwar Vishwanath [Final], 111 Radha Niwas, Engineers' Colony, Shiwaji Park, Dadar, Bombay. H. N. Dallas, B. Matthews, S. H. Parekar.
- Simon:** Montie, B.Arch. (Rand) (Passed a qualifying examination approved by the I.S.A.A.) 19 Northwold Drive, Saxonwold, Johannesburg, S. Africa. A. S. Furner, and applying for nomination by the Council under Bye-law 3(d).
- Stewart:** Francis Drummond (Passed a qualifying examination approved by the N.Z.I.A.), 118 Campbell Street, Karori, Wellington, W.3, New Zealand. H. L. Massey, W. G. Young, J. H. White.

Obituaries

Frank Leonard Hodgson Fleming [F]. The death was announced on 7 February at his home at Constantia Nek, Cape, South Africa, of Mr. Frank Leonard Hodgson Fleming, of Johannesburg. He was elected a Fellow, R.I.B.A. in 1926.

Mr. Fleming was born in Hampshire, educated at Denstone College and went to South Africa in 1904 where he joined the practice of Sir Herbert Baker in 1910. It was in this partnership that he shared in the work of the design of many notable South African buildings, among these being the Union Buildings, Pretoria; Government House, Pretoria; Pretoria Cathedral; Pretoria Railway Station and many of the great houses of early Johannesburg. In 1913, he went to India in connection with the architectural work for the Secretariat Buildings in Delhi. In 1920, as Sir Herbert Baker had returned to his London practice, the partnership was dissolved and Mr. Fleming carried on the Johannesburg practice under his own name until in 1937 when he was joined by his son and other partners under the name of Fleming and Partners (this name has since been changed to Fleming and Cooke).

Some of the more important of Mr. Fleming's works undertaken both during his partnership with Sir Herbert Baker, and afterwards, include many of the large independent South African schools, notably St. John's College and the Roedean School, Johannesburg, and Michaelhouse and St. Anne's Colleges, Natal, also the well-known buildings of the Institute for Medical Research in Johannesburg, Rietfontein and Port Elizabeth, and the exhibition buildings for the Witwatersrand Agricultural Society at Milner Park, Johannesburg.

Secretary for the Diocese of the Transvaal, the ecclesiastical architecture of South Africa formed a very large part of his practice and he was architect of Salisbury (Rhodesia) Cathedral and over eighty churches in Transvaal, Orange Free State, Natal and Rhodesia.

In a tribute to his memory, Field Marshal Smuts writes, 'We shall never forget Fleming's association with Herbert Baker and his share in the Union Buildings and other public and private buildings which are among the glories of our country and our time'.

Fleming's Shropshire-born wife, whom he married in 1910 died at Constantia (Cape) last year and he is survived by his son, Mr. Leonard Fleming [A] who in partnership with Mr. Bernard Cooke [A] is carrying on the practice in Johannesburg under the name of Fleming and Cooke.

Mr. Owen Fleming [F] of Toys Hill, Kent has kindly contributed much of the above information from his personal knowledge of his brother's career.

The funeral service was taken by the Archbishop of Cape Town and later there was a service in St. George's Cathedral, Cape Town and a memorial service in St. Mary's Cathedral, Johannesburg.

Ernest George Fowler [F] was born in 1881 and died on 16 January last. After his appointment as Architect and Surveyor to the Leicestershire Education Committee in 1907 he was responsible for the whole of the school buildings' programme for Leicestershire from 1907 to September, 1948, including 57 schools and three technical colleges, as well as numerous buildings for Loughborough College: at the

College he was architect of the Engineering and Textile Blocks, Residential Halls and a gymnasium incorporating an indoor swimming-pool, with under-water lighting. From September, 1948, the work of the Education Architect and Surveyor's Department was taken over by the Leicestershire County Architect.

Mr. Fowler served in the first World War with the rank of Captain and held a commission in the Home Guard in the Second World War. He was very well known in Leicestershire. **Edward Henry Eley, C.M.G., C.B.E., D.S.O., T.D., D.L. [L]** was senior partner in the firm of Eley and Rickcord, of Woolwich. His death last November ended a long and distinguished career, part civilian and part military. Colonel Eley was chairman of the Woolwich Equitable Building Society, and died, aged 74, at his home, Wensley House, Eltham, after an eight weeks' illness.

Born at Colnbrook, Colonel Eley had been practising in Woolwich as a surveyor since 1899, and held the appointment of valuer to Woolwich Borough Council since 1924. Since 1931 Colonel Eley had been a member of the Board of the Woolwich Equitable Building Society, and in 1940 he became vice-chairman, seven years later being elected chairman. On many occasions he represented the society at conferences in this country and abroad, and he was popular with every section of the society's staff.

Carrying on the tradition of his wife's family, Colonel Eley joined the 2nd Kent Artillery Volunteers in 1899, and in 1915 went to France with the 47th Division in command of the 8th (London) Howitzer Brigade, R.F.A. From 1916 he commanded the 238 Army Brigade, R.F.A., from 1917 the 179 Army Brigade, and from 1919-24 (8th London) Brigade. In 1924 he became C.R.A., 47th Division, T.A., which position he retained until 1928, when he became A.D.C. to King George V. Subsequently, until 1941 he was A.D.C. to King Edward VIII and King George VI. He was awarded the D.S.O. in 1917, the C.M.G. in 1916, and the C.B.E. (Military Division) in 1923.

A Deputy Lieutenant of the County of London for about twenty years, Colonel Eley was also an officer of the Venerable Order of St. John of Jerusalem, a liveryman of the City of London, a member of the Wheelwrights Company, and a member of the National Council for the Rehabilitation of Industrial Workers. He was also a prominent Freemason.

Edgar Quiggin [F]. Amongst the large assembly of mourners at the funeral of Edgar Quiggin were many of his architectural friends including members of the Council of the Liverpool Architectural Society paying a last tribute to an architect whose life's work has been spent in the Liverpool area.

Mr. Gilbert Fraser [F] has contributed the following notes on Mr. Quiggin's career.

Edgar Quiggin died on 6 February. The service was held in the Church of St. Michael, Blundellsands, a building of his own conception and design and it was a happy reference by the Vicar when he stated that 'here in this edifice was a monument to the memory of one who was devoted to his craft'.

Edgar Quiggin was a partner with Ernest Gee and together they carried out many notable building works amongst which can be included the following:—Gorsdale Road School, Wallasey; Liverpool College for Girls, Huyton; Moreton Eastway School; Oswestry Girls' School; Wallasey High School for Girls; Waterloo and Seaford U.D.C. Schools; Southport Council School; St. Michael's Church, Blundellsands; All Hallows' Church, Allerton—New Parish Hall; Tilstone Lodge, Tarporley; Pudlestone Court, Hereford.

For many years he was Honorary Treasurer of the Liverpool Architectural Society and was keenly interested in all fields of sport.

Algernon S. R. Ley [F]. On 7 January 1950 Mr. Algernon S. R. Ley, M.I.Struct.E., [F], died. He was senior partner in the firm of Ley, Colbeck and Partners, 51 Bishopsgate, London, E.C.2, and was 78 years of age.

Trained at University College, London, he also studied at the British School at Athens. He was articled to Wigg, Oliver and Hudson, of Bedford Row, W.C., and commenced practice in London in 1897. He won competitions for schools at Romford, Maldon, Walton-on-Naze and Clacton, and designed many other schools in and around London. Many London branch establishments of Barclays Bank were built to his designs, and he was responsible also for a number of factories in various parts of the country, including several for the Vickers-Armstrong Company.

Besides being responsible for Palmerston House, Bishopsgate, the building in which his own firm practised, Mr. Ley designed offices and showrooms in Shaftesbury Avenue, Wigmore Street and Oxford Street, and the printing works of Sir Isaac Pitman and Sons Ltd., educational printers and publishers, Bath. The Church of the Holy Redeemer, Sidcup, of reinforced concrete, was designed by him, and also a number of local authority housing estates at Sidcup and Chislehurst. His more recent work comprised plans for a community centre and club premises at the Royal Estate, Windsor, both of which are now in course of construction.

Mr. Ley always took a very great interest in church work and in local social work, being Vice-President of the Sidcup United Services Club. Freemasonry had also been a matter of great personal interest, and he held high Masonic honours.

The practice will be continued under the name of Ley, Colbeck and Partners, in which firm Mr. Ley's son, Mr. Arthur H. Ley [F] is a partner.

Leonard George Stokes [F] died on 3 February aged 46. He studied at the Bartlett School of Architecture, and in 1925 was awarded the Second Lever Prize in Architecture.

Prior to commencing private practice in 1928 Mr. Stokes served in the offices of Mr. James J. S. Naylor, Messrs. Flint Clarkson and Messrs. Smith and Brewer. He was elected Fellow, R.I.B.A., in 1942, and at the outbreak of war had just completed plans for a mental colony on instructions from the City of Portsmouth Corporation. At the time of his death he was Senior Assessor with the War Damage Commission in Portsmouth.

Mr. Stokes was well known in Portsmouth Masonic circles, and he leaves a widow and two daughters.

Harold Nuttall [A] died last Christmas Day, aged only 46. He was an official architect, articled to the late F. H. Gorst [F], of Blackpool, and commenced his architectural career in 1928 as Chief Assistant Architect to the Preston Corporation. From 1934-44 he was Borough Architect of Eastbourne, and in 1944 took up the duties of Deputy Borough Architect and Town Planning Officer to the Huddersfield Corporation, with whom he was in service at the date of his death.

His principal architectural works in his official roles were the New Public Baths, Preston, Police Headquarters, the General Hospital, Maternity Home and Schools Clinics, all in Eastbourne, and the preparation of housing schemes and town planning projects at Huddersfield.

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John Douglas Scott [A], who practised in London, was trained in the office of his father, John Scott, and commenced personal practice in 1900, after working for a short time as official architect to a London brewery company. In this capacity, and later in private practice, he was the architect of various licensed premises in London and the home counties as well as of domestic architecture.

Mr. Scott was a member of the Practice Standing Committee from 1914-40 (except for three breaks of one Session each), being Chairman in 1925-26 and 1926-27, and for many years Joint Hon. Secretary. He was also a member of the Council in 1925-26 and 1926-27, and from 1928 to 1934. Mr. Scott was at various times a member of the following R.I.B.A. Committees: Executive Committee, Finance and House Committee, Salaried Members Committee, Professional Conduct Committee, London Building Acts Committee, and the Joint Committee of Architects and Quantity Surveyors.

He died on 28 January, aged 84, and he was actively working right up to the time of his admission to hospital on 14 January.

Stanley Harold Smith [A]. A Principal Assistant Architect in the London County Council, Mr. Smith died on 15 December at the early age of 43. Trained at the Northern Polytechnic under Sir Thomas Bennett, his first appointment was to the Ministry of Works (Ancient Monuments Branch), and in 1928 he joined the staff of the L.C.C., where his abilities and quiet organizing powers were quickly realized and continued promotion followed. At his death he was second in command of a selected team of architects engaged on the Concert Hall and community buildings on the South Bank. In 1943 he was commissioned as Staff Captain, Directorate of R.E. Equipment.

Notes from the Minutes of the Council

MEETING HELD 7 FEBRUARY 1950

Appointments

(A) **Elmes Testimonial Fund : R.I.B.A. Trustee**: Mr. Harold Dod [F] in place of Mr. Duncan Campbell [F].

(B) **Royal Sanitary Institute and Sanitary Inspectors' Examination Joint Board**: R.I.B.A. Representative: Mr. L. A. Chackett [F] in place of Mr. F. Milton Cashmore [F].

(C) **Women's Advisory Council on Solid Fuel**: R.I.B.A. Representative: Miss Evelyn Drury [A] in place of Miss Gertrude Leverkus [F].

(D) **Building Divisional Council**: R.I.B.A. Representative: The Chairman of the Architectural Science Board (Mr. Lister P. Rees [A]) in place of Mr. G. W. North [F].

(E) **B.S.I. Committee FHB/4 Dairy Buildings**: Mr. C. J. Epril [F] and Mr. R. M. Betham [A].

(F) **B.S.I. Committee TIB/10 Fibre Building Board for General Building Purposes**: Mr. D. W. Aldred [F].

(G) **University of London Architectural Education Committee**: R.I.B.A. Representatives for Year beginning 1 March 1950: Mr. Kenneth M. B. Cross [F] and Mr. Anthony M. Chitty [F].

(H) **L.C.C. District Surveyors' Examination Board**: R.I.B.A. Representatives: Mr. F. Milton Cashmore [F], Mr. L. A. Chackett [F], Mr. H. Cubitt [F], and Mr. G. Fairweather [F].

New Year Honours: The Secretary reported the following additional awards: C.B.E.: T. N. Wynne-Jones, O.B.E. [F], Chief Architect, Public Works Department, Colombo, Ceylon.

He entered for a number of competitions, being successful in those for the Naval Memorial at Liverpool (with Mr. Blythin), a façade in Cornish granite, and a design for telephone boxes (Ireland). He was a keen exhibitor at the Southgate Society of Arts, and devoted much of his spare time to a North London youth club. Mr. Smith leaves a widow and two young sons.

Sidney Albert Gulliford [L] died suddenly on 11 November last, aged 53. He was a partner in the firm of Gutteridge and Gutteridge, architects and surveyors, of Southampton, having joined the firm as a boy and been with it nearly forty years. He became L.R.I.B.A. in 1931.

He had many interests in Southampton, being a prominent Rotarian, a member of Southampton Round Table since its inception, and a prominent member of the Forty-One Club. He served in the Hampshire R.G.A. in the 1914-18 war, and was vice-president of his local British Legion branch. During the last war he worked in the Central Report Centre, A.R.P.

His principal architectural works were the University College, Southampton, Territorial Army drill halls and premises in Southampton and neighbourhood and hospitals in Hampshire.

In Freemasonry he was a founder member and past master of the Lodge of Chivalry, a member of the Albert Edward Lodge, and a member of the Chapter of Concord. He was a keen cricketer and angler, and took a prominent part in local pursuits of these sports. He was also an active member of the Hampshire and Isle of Wight Architectural Association.

Mr. Gulliford leaves a widow and one son, aged 21.

James Murie Henderson, A.M.T.P.L. [A]. The R.I.B.A. has only just been notified by his mother of the tragic death on 27 February 1949 of James M. Henderson, late County Architect and Planning Officer to Caithness County Council. He was early in the war a pilot in the R.A.F.V.R., but was discharged on medical grounds. In 1946 he left Caithness local government to take up an appointment in Trinidad, and it was there that he was drowned in a bathing accident at the age of 37.

Mr. Henderson was trained at the Glasgow School of Architecture and in the office of Mr. L. H. Ross from 1930-35, and went in 1938 to the architectural office of the Royal Burgh of Rutherglen,

On his discharge from the R.A.F. he went to Rolls Royce Ltd. as chief architect of their factory at Glasgow: on its completion he was recalled at the request of Rutherglen Corporation to take over its town planning, where he prepared surveys for the Department of Health for Scotland.

It was in 1944 that he went as County Architect and Planning Officer to the Caithness County Council, and he was there responsible for starting, equipping and staffing the office: his duties were the maintenance of all county buildings, the erection of new housing, schools, hospitals and offices and their preservation and the administration of Town Planning schemes.

During his tenure of office in Caithness his services were highly appreciated, and he did much to revive the local flagstone industry. Recognizing its value as a building material, he used it in his housing schemes for roofing and for tiled fireplaces and other interior works.

Mr. Henderson was interested in youth work, and was Adjutant of an A.T.C. Squadron when he resided in Scotland.

appointed an R.I.B.A. representative to serve on the Joint Production Committee for each of the 11 administrative regions into which England and Wales are divided.

The following members have been appointed: Northern—Lieut.-Colonel A. K. Tasker [F], E. and W. Ridings—Mr. Norval R. Paxton [F], N. Midlands—Mr. C. F. W. Haseldine [F], Eastern—Mr. Peter Bicknell [F], London—Mr. Richard H. Sheppard [F], Southern—Mr. T. L. J. Chamberlain [F], S. Western—Mr. J. Ralph Edwards [F], Wales—Mr. Edwin Smith [F], Midlands—Mr. S. J. Stainton [F], N. Western—Mr. J. S. Beaumont [F], S. Eastern—Mr. Cecil Burns [F].

Direct Election to the Fellowship: Mr. Jack Denyer Cheesman, F.R.A.I.A., President of the Royal Australian Institute of Architects, was elected by a unanimous vote to the Fellowship under the provisions of the Supplemental Charter of 1925, Section IV, Clause 4.

Royal Observatory, Herstmonceaux: The Secretary reported that, following representations which had been made in regard to the move of the Royal Observatory, the Admiralty had appointed Mr. Brian O'Rorke [F] as consulting architect for the new buildings at Herstmonceaux.

R.I.B.A. Diploma in Town Planning: The Council approved the award of the R.I.B.A. Diploma in Town Planning to Mr. Robert G. Turnbull [A] and to Mr. Leslie Vivian Mitchell [A].

Christmas Holiday Lectures: The President referred to the series of Christmas Holiday Lectures for boys and girls given by Mr. R. E. Enthoven [F], which had been most successful; and on his proposition a hearty vote of thanks was accorded to Mr. Enthoven.

Bequest to the Institute: The Secretary stated that under the will of the late Mrs. M. D. Spooner, widow of Charles Sydney Spooner [F], the sum of £100 had been left to the Institute for the purchase of books in memory of her husband.

Copyright in Architectural Drawings: Model Form of Conditions for Architectural Competitions: On the recommendation of the Competitions Committee the Council approved an amendment to Clause 17 of the Model Form of Conditions for Architectural Competitions in order to bring that Clause into line with Clause 1 (f) of the Scale of Professional Charges.

Clause 17 will therefore in future read as follows: 'Copyright in all drawings and in the work executed from them will remain the property of the architect. The architect shall, if requested to do so, at the completion of the work supply free of charge to the client drawings sufficient to show the main lines of drainage and other essential services.'

Proposed Unesco Publications of School Buildings. As recommended by the Committee on School Design and Construction the Council approved a suggestion put forward by the

Education Department of Unesco that the Institute should collaborate in the preparation of reference works on School Buildings in consultation with the Ministry of Education for the use of backward countries.

Membership: The following members were elected: as Honorary Associates, 2; as Honorary Corresponding Member, 1; as Fellows, 5; as Associates, 46; as Licentiates, 5. Students: 24 Probationers were elected as Students.

Applications for Election: Applications for election were approved as follows: *Election* 7 March 1950: as Honorary Fellow, 1; as Fellows, 7; as Associates, 64; as Licentiates, 7.

Applications for Reinstatement: The following applications were approved: as Fellow, Charles Frederick Ward; as Associate, Basil Alfred Peter Winton-Lewis; as Licentiates, Roland Look; Albert George Smith.

Resignations: The following resignations were accepted with regret: Robert Martin [F], Arthur Hayter Crickmay [A], Bruce Martin Flegg [A], Bert Raymond Hunt [A], Robert Alexander Scott [A], Harry Cornelius Hunter [Retd. A], Frank Oliver Donaldson [L], Edward Horace Lloyd [L], William James Medcalf [L], Reginald Charles Vass [L].

Applications for Transfer to Retired Member Class under Bye-law 15: The following applications were approved: as Retired Fellows: Waller King Bedingfield, William Theodore Percival Bryce, Edward Stanley Clarkson, Francis Edward Jones, Joseph Pearce Pearce, Harry Reginald Poulter, Harry Redfern, John Knox Vinycomb. As Retired Associates: Frederick Billinghurst Chester, John Thomas Stone. As Retired Licentiates: William Edward Biscomb, John Sanders Bray, Henry Adolphus Buck, Edwin Spencer Hartley, Stanley Oliver Hill, William James Fulford.

Obituary: The Secretary reported with regret the death of the following members: Alfred George Staveley Bailey [F], Ernest George Fowler [F], Algernon Sydney Richard Ley [F], Robert Miller [F], John Herbert Pearson [F], Charles Ridley [F], Percy Robinson [F], William Ernest Watson, T.D., Barrister-at-Law, Hon. LL.D. [F], the Hon. George Sturrock [Retd. F], James Murie Henderson [A], Harold Nuttall [A], John Douglas Scott [A], Sydney Douglas Clode [L], John Kirksop Webb [L], Bertram Henry Perrott [L], Warwick Scott [L], Arthur Travis [L], Walter William Roberts [Retd. L], Edmund Woods [Student].

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant, or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. W. C. Brown, A.M.T.P.I. [A], has been promoted from the position of Deputy to the post of City Architect of the City of Bradford, replacing **Mr. J. T. Castle [A]**, who recently left to take up the appointment of Architect to the Berkshire County Council.

PRACTICES AND PARTNERSHIPS

Mr. Leonard Bulmer [L] and **Mr. Alan Wilson [A]** have joined **Messrs. Johnson and Crabtree [F/F]** in partnership. The practice will continue as **Johnson and Crabtree** at 20 Priory Place, Doncaster, and at 8 Robert Adam Street, London (WELbeck 8918).

Mr. R. Towning Hill [A] has commenced practice at 18 Orchard Street, Bristol 1 and will be pleased to receive trade catalogues etc.

Mr. G. J. McLindon [A] will be pleased to receive trade catalogues etc. relating to all types of agricultural buildings, at 128 Moscow Drive, Stoneycroft, Liverpool, 13.

Mr. Guy Herbert Nicholls [L] and **Mr. W. Rowley Hall [A]**, who previously practised under the style of **Nicholls and Hall** at 66a Wigmore Street, London, W.1, dissolved partnership on 2 February 1950. **Mr. Guy H. Nicholls** now practises under the style of **Guy H. Nicholls** from the same address, and **Mr. W. Rowley Hall [A]** practises also in his own name from 264 Baring Road, Grove Park, London, S.E.12.

Messrs. Nightingale and Ambrose [F/F] have opened a branch office at 19 Dumfries Place, Cardiff, and will be pleased to receive trade catalogues etc. Their London address is 27 John Adam Street, London, W.C.2.

Mr. Robert W. Pite [F] has commenced practice at 30 Craven Street, Strand, London, W.C.2 (WHitehall 3556).

Mr. Winston Walker [F] has relinquished his teaching appointment at the Hammersmith School of Building to devote more time to his private practice. He will, however, continue to coach privately for the Final Design Examination of the R.I.B.A. He will be pleased to receive trade catalogues, technical information etc. at 107 Sloane Street, London, S.W.1. (SLOane 1410.)

Mr. Felix Walter [L] and **Mr. Eric Sandon [A]** have taken into partnership **Mr. Peter Berner, A.M.T.P.I. [A]**. They will continue to practise as **Suffolk Group, Chartered Architects**, from 1 Quay Street, Woodbridge, Suffolk (Woodbridge 546).

CHANGES OF ADDRESS

Mr. E. E. Bedingfield [A] has removed from Little Oakhill House, Oakhill Road, Sevenoaks, to 'Charnwood', Oak Hill Road, Sevenoaks, Kent (Sevenoaks 3319).

Mr. A. R. Bramley [A] has removed from Upper Colwyn Bay to 33 Gadals Road, Llysfaen, Denbighshire, N. Wales.

Mr. W. J. Horton [L] has left Romford and future correspondence and trade catalogues etc. should be addressed to him at the Borough Engineer and Surveyor's Department, Town Hall, Southall, Middlesex.

Mr. A. Wilson Kneale [L] has removed to 11 St. Michael's Avenue, Bramhall, Cheshire; his new telephone number is Bramhall 2560.

Mr. John Lacey, A.M.T.P.I. [A], has removed his office from 37 Hampstead Lane, London, N.6, to 1 Gower Street, London, W.C.1. (LANgham 5161.)

Messrs. Hugh Minty and Partners [F] moved to Chantrey House, Buckingham Palace Road, Westminster, London, S.W.1 (SLOane 9121-3), on 27 February 1950.

The address of **Mr. Alan Niven [L]**, formerly of 47 Beech Way, Twickenham, Middlesex, will be c/o 31 Surrey Street, Melbourne, Australia, and he will be pleased to receive trade catalogues etc.

Mr. R. Mervyn Noad [A] and **Mr. A. F. Wallace [A]**, who practise under the style of **Noad and Wallace**, have moved their offices to 278 St. Vincent Street, Glasgow, C.2. (Central 6677.)

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate, with London and provincial practice, wishes to meet Associate with view to partnership. Box 12, c/o Secretary, R.I.B.A.

Fellow (aged 36) wishes to purchase architect's practice or partnership leading to eventual acquisition. Any area except London considered and all replies treated in strictest confidence. Box 14, c/o Secretary, R.I.B.A.

Fellow, with old-established general practice in Home Counties, wishing to retire offers partnership to experienced Associate able to complete work in hand and take over at early date. Box 10, c/o Secretary, R.I.B.A.

FOR SALE

For Sale. A limited number of practically new adjustable steel antiquarian drawing stands and boards; also oak plan chests. Box 8, c/o Secretary, R.I.B.A.

"A.B.S." HOUSE PURCHASE LOANS

Alternative Schemes

1. Normal Advance: 80 per cent of Valuation. **Interest:** 4 per cent gross. (Borrower pays Survey Fee and Legal Costs, totalling 1 per cent of loan.)

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Repayment by means of an Endowment Assurance term not exceeding 25 years under (1) or 30 years under (2).

HOUSES IN COURSE OF ERECTION

Advances increased to 90 per cent of the controlled selling price.

Particulars from: The Secretary, A.B.S. Insurance Department, 66, Portland Place, London, W.1. (Tel.: LANgham 5721.)

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